LEATH & ROSS,

WHOLESALE AND EXPORT

HOMŒOPATHIC CHEMISTS,

9 VERE STREET, W.,

AND AT 5 ST. PAUL'S CHURCHYARD, E.C., LONDON.

Wholesale and Export Department—9 VERE STREET, W.

OUR £10 10s. AGENTS' SHOW CASE.

Contents realise £17 17s. 8d.

Dimensions.—Length, 18 in.; Breadth, 13 in.; Height, 13 in.

Description.—A Handsome Bent Glass Case, with three drawers, the contents of top drawer visible, the Pilules and Tinctures arranged in the other two in alphabetical order.

WHOLESALE PRICE LIST OF MEDICINES PUT UP READY FOR SALE.

PILULES—	Sixpenny Bottles	— 2/9 per dozen.	TINCTURES—	Sixpenny Bottles	— 2/9 per dozen.
	Ninepenny "	— 4/- "		Shilling "	— 5/- "
	Shilling "	— 5/- "			

Subject to Cash Discount.

PROPRIETARY ARTICLES.

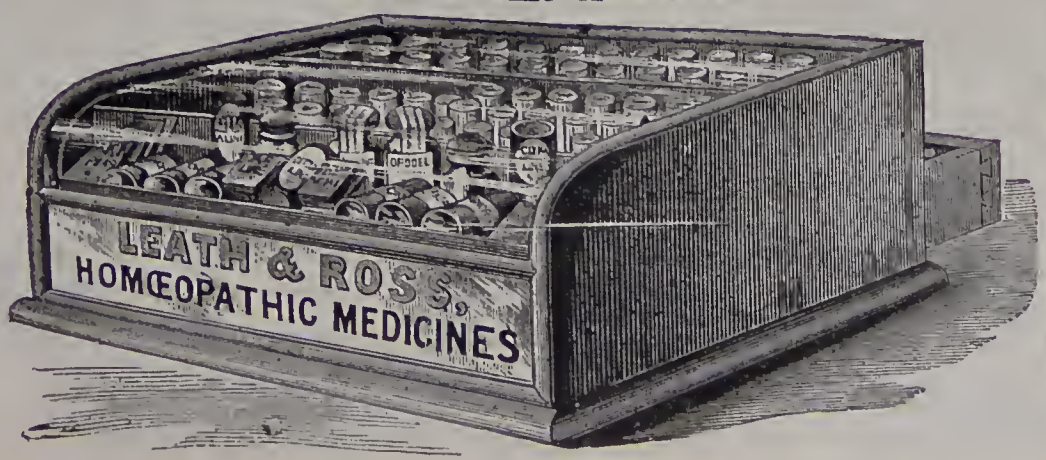
Neuraline	1/1½	Berberine	1/1½	Linimentum Auricularis	1/1½
Glykaline	1/1½	Chilblain Liniment	1/1½	Bryonia Liniment	1/1½
Phospho-muriate of Quinine	1/1½	Odontagic Essence	1/1½	Corn Eradicator	1/1½

All the above Proprietary Articles, 9/6 per dozen. Subject to Cash discount.

OUR £6 6s. AGENTS' SHOW CASE.

Contents realise £10 18s. 8d.

Dimensions.—Length, 20 in.; Breadth, 15¾; Height, 9½ in.



Description.—A Handsome Bent Glass Case, with two drawers, the contents of top drawer visible, the Pilules and Tinctures arranged in alphabetical order.

MARK TWAIN ON SOAPS!

'VINOLIA' SOAP

Contains extra Cream, instead of Free Soda and Potash, which eat into and shrivel the skin, hair, and nails. It is also de-alkalised and de-hydrated.

For the Toilet, Nursery, Bath, Skin Irritations, and Shampooing.

(Toilet) 2s. 6d., (Medical) 2s. per box of three Tablets.

'VINOLIA'

A Plastic Emollient Cream, for the Skin in Health and Disease.

Relieves Itching, Insect Bites, Sunburns, Chaps, and Skin Irritations.

THE CHOICEST OF CREAMS.

1s. 9d., 3s. 6d., and 6s. per box.

"My missionaries were taught to follow the (soap) signs in their labours, and explain to the lords and ladies what soap was, and if lords and ladies were afraid of it, get them to try it on a dog. The missonary's next move was to get the family together, and try it on himself; if any final doubt prevailed, he must catch a hermit. If a hermit could survive a wash, and that failed to convince a duke, give him up, let him alone. Whenever my missionaries overcame a knight-errant on the road, they washed him, and when he got well they swore him to get a bulletin board, and disseminate soap and civilisation the rest of his days."—From Mark Twain's New Book.

'VINOLIA' SHAVING SOAP,

A de-alkalised, de-hydrated, superfatted Bay-Rum Soap.

Yields a most soothing, substantial lather, and is the only Shaving Soap of its kind in existence.

2s. and 3s. 6d. per stick.

Does not eat into the Skin, or dull the Razor.

'VINOLIA' POWDER

A Soothing, Soluble, Silken Rose Dusting Powder, free from poisons and injurious agents.

For Toilet, Nursery, use after Shaving, Roughness, Weeping Surfaces, Eczema, etc.

1s. 9d., 3s. 6d., and 6s. per box.

CAN BE OBTAINED OF ALL CHEMISTS.

BLONDEAU ET CIE.

LONDON, PARIS, AND NEW YORK.

ENGLISH DEPOT: RYLAND ROAD, LONDON, N.W.

A Copy of this Supplement is inserted in every number issued of "The Chemist & Druggist."

The Chemist and Druggist SUPPLEMENT

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, APRIL 26, 1890.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

OFFICES: 42 CANNON ST., LONDON, E.C.

ADVERTISEMENTS for this Supplement can be received on FRIDAY MORNING, first post, though it is requested that these may be sent in as early in the week as possible.

EXCHANGE COLUMN ADVERTISEMENTS will appear on page 12 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the next issue.

All Advertisements for this Supplement and Exchange Column must be prepaid. Remittances payable to EDWARD HALSE and crossed MARTIN & Co.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1843, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1.—£900.—LONDON, E.C.—Central position; old established; returns under management £900 yearly; large, well-fitted shop and commodious business premises; about £850 will be accepted, or good offer considered.

2.—£800.—LONDON, W.—Old-established good-class Business, situate in main road; returns £800 yearly, with every facility for extending trade; *profits very good*; well-fitted shop, and excellent stock; price £600.

3.—£500.—LONDON, N.—Dispensing and Retail, with Post Office attached; returns from business nearly £500; post office more than pays rent; *profits about £230 net*; well-fitted shop and large stock; comfortable house with garden; price £400.

4.—£650.—LONDON SUBURB, N.W.—Retail and Prescribing Business; returns under manager nearly £650; good prices; handsomely-fitted shop, good stock; commodious house and garden attached; business can be much increased under personal management; price £450.

5.—£400.—LONDON, N.—Prescribing and Retail; changed hands once in fifty years; situated in a thickly-populated locality; returns over £400 yearly, *net profits nearly half*; corner shop; rent low; price £350.

6.—£550.—LONDON SUBURB, W.—Dispensing, Retail and Prescribing Business; returns present about £550 yearly, rapidly increasing; double fronted corner shop, good stock; comfortable house, low rental; price £450.

7.—£900.—HOME COUNTY.—Good town; Chemist's and Dentist's Business of good-class; returns last year £900 nearly; well-fitted shop and good stock; attractive house; price, to include stock, fixtures, and goodwill of dental practice, £800, or offer considered.

8.—£1,100.—SOMERSET.—Attractive and fashionable town; old-established Business situate in prominent position; returns about £1,100; particulars on application with a London reference.

9.—£2,000.—EASTERN COUNTIES.—Mixed Business, with oils and colours; returns last year £2,000; increase 25 per cent. over last year; large double-fronted shop, handsomely fitted, and good stock; terms small premium, to be arranged, and valuation of stock and fixtures.

10.—£850.—KENT.—Family Retail and Dispensing Business, situate in large business town; returns from profitable trade about £850, including many proprietary articles; well stocked shop; good 8-roomed house; price £800.

11.—£550.—SOUTH OF ENGLAND.—Fashionable watering-place; Light Retail and Dispensing Business of good class; returns under manager, £550; full prices, except patents; single-fronted, well-fitted shop and good stock; good six-roomed house; about £480 required.

12.—£1,100.—SURREY.—Within easy distance of town; Good-class Business with Post Office and profitable wine agency attached; returns gross £1,100, *net profits above the average*; large house, good garden; moderate rental; about £800 required.

13.—£400.—BIRMINGHAM.—Good-class Business in suburban district; returns £400 yearly; well-fitted shop, with large stock; good house and beneficial lease; full investigation permitted, and offer wanted.

14.—£800.—PLYMOUTH.—Good position; Retail, Dispensing, and Prescribing Business; returns £800 yearly; *net profits* £340, proof given; large house; price about £500.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.

Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London agent.

SPECIAL NOTICE.—TO PRINCIPALS AND ASSISTANTS.

MESSRS. ORRIDGE & Co. Register Vacancies for Situations FREE OF CHARGE.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

F. J. BRETT,
VALUER, LEICESTER,
60 St. Stephen's Road.

References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS. 20 YEARS' EXPERIENCE.

KENT.—£850 returns; profitable good-class Retail, with excellent specialities; good house; low rent; lease; price £750.

HULL.—Prescribing and Retail: returns £300, were £500 before illness; leading thoroughfare; rent £26, no taxes; price £120, a bargain.

LINCOLNSHIRE.—£450 returns: Light Retail. Prescribing, Dispensing, and own preparations; very low rent; price £250.

BOLTON (near).—Branch Retail; returns £5 week, can be doubled by personal attention; price £160.

YORKSHIRE.—Good town; returns £500, under assistant; profitable Retail and Prescribing; price £350.

LEEDS.—Branch Retail; doing £7 week; price £250, or valuation.

NORTHAMPTONSHIRE.—Good Country Retail: returns £300, has done £700, and would again with attention; price £150.

BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

FOR DISPOSAL, two small Chemists' Businesses in Hull: capital required about £90 and £150 respectively; at value. For further particulars, address James Stocks, Business Agent and Valuer, 52 Savile Street, Hull.

LEEDS.—For immediate Disposal, Chemist and Druggist's and Oil Business; near market; established 27 years; good chance for a pushing man; good house. For further particulars, apply Wm. Turton, St. Peter's Street, Leeds.

FOR Sale, an old-established and profitable Business (Retail), with Post Office and Telegraph attached, near Manchester; price £500; good house and nicely situated. Address, G., care of T. Jones & Co., 5 Broom Street, Withy Grove, Manchester.

FOR Sale, an old-established country Business, good-class Dispensing, Prescribing, and Retail, with Seeds; no oils, wines, nor other heavy trade; good prices; returns £800; convenient premises at low rent. Apply, "Chemist," care of Mr. Bingham, 106 Cotham Rd., Bristol.

SEASIDE.—Retail, Dispensing, and Prescribing: returns about £500; cash required £450; stock good; convenient house, with long lease at low rent; full investigation allowed: family trouble sole reason for disposal. Apply. E. R., care of Wright, Layman and Umney, Southwark Street, London, S.E.

OLD-ESTABLISHED BUSINESS.—Age cause of disposal; shop double fronted, well-fitted and stocked; cash trade; populous locality; valuable proprietary medicines; state amount of cash at command: terms liberal. Address to C. M. K., Miss Atkinson, 40A King William Street, London Bridge, E.C.

CHEMIST and Druggist's.—A bargain.—A genuine and profitable Business; established over 50 years; near City, in populous S.E. district; takings over £700 a year: house let off nearly covering rent; lease 16 years; cash £500 for goodwill, fixtures, stock, and lease. "Trustee," 3 Clifton Villas, Lincoln Road, East Finchley.

FOR Disposal, old-established Business, main thoroughfare of rising county town, 30 miles out: good premises on lease; garden, fishing, and boating; returns between £500 and £600; good Proprietaries; profits above average; every investigation allowed; incoming easy; satisfactory reasons for disposal. Mane, 63 High Street, Chelmsford, Essex.

STAFFORDSHIRE.—Manufacturing town: established and successfully carried on nearly 60 years; present returns nearly £1,000, under bad management; former returns more than double; good corner, main street; nice house, private entrance; easy rental; price only £450. "Staffs," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£475 OR VALUATION; no goodwill; Midlands; genuine good-class Retail, Dispensing, and Prescribing Business, returning £700; large profits; rent and other expenses low; good house and garden; changed hands once in thirty years; price £475 or valuation. W. R. C., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WEST OF ENGLAND.—Unopposed, old-established Business for immediate Sale; returning over £1,000 yearly; good profits; full prices; rent £30; large house, with very good garden; satisfactory cause of sale; same hands many years; price £650 or offer: thorough investigation invited. "Santonin," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AN old-established Drug and Dispensing Business in a good manufacturing and market town in the West of England; good house and business premises; part could be let off; six months' introduction given: returns nearly £2,500, with good profits; goodwill, stock, fixtures, &c., £2,300; no agents. Apply, "Golonde," care of Wright, Layman & Umney, 50 Southwark Street, London, S.E.

BIRMINGHAM.—Handsomely-fitted and well-stocked Pharmacy, in increasing suburban neighbourhood: good house, garden, &c.: cash price, £550. Apply, Richard Tomlinson & Sons, Medical Fitters, Bond Street, Constitution Hill, Birmingham.

MIDLANDS.—Country town.—For immediate disposal, an old established Light Retail Business; returns over £300, capable of increase; good opening for Dentistry; good house and premises, with garden; every investigation allowed. 53/40, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

NORTH STAFFORDSHIRE.—A General Retail and Prescribing Chemist's Business for sale; shop handsomely fitted and well stocked: occupies best position in main street; cash trade; returns from £400 to £500; rent £35; great scope for increase. 62/19, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR Disposal, proprietor taking larger business, an old-established light Retail and Prescribing Business in small town in Midlands; capable of great extension; good house at low rental; large garden, lease; increasing returns; price £260; trial if required. R. J. N., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

CHEMIST'S Business for sale in Aldershot; same hands 30 years; retiring through age; good position; near to barracks and camp; largest garrison in England; house contains 7 rooms, shop, and cellar, with large garden and yard at back: rent £60, exclusive of taxes; price of stock, fixtures, and goodwill, £150. Address, S. M., Bisley, near Woking, Surrey.

LONDON, N.—An old-established (1840) Pharmacy; very populated district, main road, corner shop; mahogany fittings; returns average £9 weekly, cash trade, profits half returns: good opening for Dentistry; suit beginner or branch; easy terms; satisfactory reasons for disposal; investigation courted; immediate possession. "Chemist," c/o W. J., 32 St. Peter's Street, E.

GOOD Yorkshire town: General, Retail, Prescribing, and Teeth Extracting; returns £40 to £50 monthly; splendid house, and every convenience; old-established; only intending purchasers are asked to apply; every investigation allowed; price £350; cash buyer wanted. Apply, "North Yorkshire," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BUSINESSES WANTED.

WANTED, Genuine Dispensing and Light Retail Business, returning £600 or £700, in good neighbourhood; South Coast or south preferred; thorough investigation; no agents. Full particulars, in confidence, to "Chemist," 74 London Road, Tunbridge Wells.

WANTED, in South of England, good going Retail and Dispensing Business; must bear full investigation; price about £400 or £500; give turnover, profit, number of receipts per annum, particulars as to prices got, and full information regarding town, &c., &c.; no agents. Address, "Spiro," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR SALE.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

CHEMIST and Druggist's Stock and Utensils, with fixtures at option.—For sale, the Stock and Utensils of an old-established Chemist and Druggist. Can be viewed any afternoon, between 3 and 4, by application at No. 102 Broadway, Stratford.

TO CHEMISTS FITTING UP.—Drawers, Counters, Show-cases and Carboys, &c.—For Sale, one 12-ft. range new mahogany drawers, with plate-glass labels and knobs, £9; one 12-ft. ditto, pine drawers, gold labels and glass knobs, £6 12s.; one 9-ft. mahogany-top counter, fitted with drawers, £5; one new bent tooth-brush case, 25s.; one 2-ft. second-hand mahogany desk and glass case in front, 47s. 6d.; three 3-gallon, 9s. 6d.; four 4-gallon, 12s.; and three 6-gallon carboys, 15s. 6d. each; 180 shop rounds and jars, gold labelled, £9; plate-glass counter show-case, 36 × 18, 35s.; 6-ft. dispensing-screen, mirror centre and marble slab, £5 10s.; ditto, new design, £7 10s. R. Tomlinson & Sons, Medical Fitters, &c., Bond Street, Birmingham.

PARTNERSHIP.

A PARTNERSHIP is offered in a well-established and good-paying business in the Midlands to a passed man; good opening for a registered dentist; cash required £400. Apply, 58/34, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TO LET.

TO LET, a newly-built House, in one of the main thoroughfares of Maidstone, Kent, suitable for a chemist; no other in the same street. John Goodbody, "Dog and Gun," Boxley Road, Maidstone.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

JUNIOR, immediately, in a large Retail country business. Apply, stating age, experience, references, &c., to H. Hands, Fenny Stratford.

WANTED immediately, a good Junior Assistant, for a few months, probably permanently. Apply, stating salary, &c., Smith, 5 Norman Road, St. Leonards-on-Sea.

TOWN Traveller wanted for drugs and sundries. Apply by letter, stating experience and salary, to T. T., care of Housekeeper, 82 Bishopsgate Street, London.

AGENTS, calling upon Chemists, Druggists, and Drysalters, wanting extra commission should address B. W. F., care of Davies & Co., Advertising Agents, Finch Lane, Cornhill.

IMMEDIATELY, an Assistant as Manager for branch shop; must be steady, active, and of good appearance; age 25 to 30. Apply, stating salary out, Alfred Mays, South Shields.

AN Assistant, not under 23 years of age, accustomed to good-class Family trade. State age, height, salary, and when disengaged, to W. Parsons, 4 Eastcombe Terrace, Blackheath, S.E.

FOR Japan.—Qualified English Assistant: about 25: first-class London experience and references indispensable. Apply by letter to Dakin Bros., Creechurch Lane, Leadenhall Street, London, E.C.

WANTED, a qualified Assistant for best-class Dispensing business; state age, salary required, give references, and enclose carte (which will be returned). Ralph Cuthbert, Chemist, Huddersfield.

INVOICE Clerk wanted for Export: must have a thorough knowledge of the Drug trade. Address, with full particulars and experience, salary required, &c., to W. J. B., Messrs. Street & Co., 30 Cornhill, E.C.

IMMEDIATELY, a qualified Assistant, about 25, who has been accustomed to good Dispensing business: with knowledge of Homœopathy preferred: four assistants kept. Apply personally, F. W. Warren & Co., 340 Harrow Road, W.

QUALIFIED Chemist's Assistant wanted for West Australia; age not exceeding 30: salary £120; second-class passage paid out. Apply by letter, stating full experience, qualifications, &c., to W. J. B., Messrs. Street, 30 Cornhill, E.C.

TRAVELLER, country, wanted, calling on Chemists and Druggists, open to represent a Sundry house; also on commission. Reply, with fullest particulars, stating age, ground covered, &c., to A. Z., care of H. Ellis, 113 Fore Street, E.C.

WANTED, immediately, Junior Assistant, about 18; must be active and energetic, and of agreeable manners. Send full particulars, salary, photo, and references, to J. & J. Thompson & Co. (Limited), 192 Manchester Street, Oldham.

WANTED, Junior Assistant for good country business: hours of business 7.30 to 8 o'clock, 5 o'clock Thursdays; no Sunday duty. Apply, with full particulars and enclosing carte (to be returned), to Turner, Chemist, St. Ives, Hunts.

WANTED, an indoor Assistant (permanency) for good-class Dispensing business and Hospital Dispensing: personal interview preferred, or full particulars as to age, salary, height, references, and photo to Rumsey, Chemist, Lordship Lane, S.E.

WANTED, competent Assistant not under 23 years of age (indoors); good reference; capable of taking charge. Apply (with photo, to be returned), stating age, height, salary required, if accustomed to General, Retail, and Dispensing trade, to 11 Rose Crescent, Cambridge.

WANTED, a qualified Assistant of good address in a country Dispensing business where there are several assistants. Apply, stating previous experience, salary required (indoor), and references, to "Chemicus," Messrs. Wm. Edwards & Sons, 157 Queen Victoria Street, London.

IMPROVER or Apprentice just out of his time; must be quick and intelligent; first-class Retail and Dispensing business; time allowed for recreation or study; applications not answered in three days declined. State full particulars to Julian Horrell, M.P.S., Pharmaceutical Chemist, Broadstairs.

WANTED, Addresses of Travellers willing to add to their present lines recently patented Sponge Bags; state quantity sold per annum during last five years; a few special qualities of direct importation of Ceylon Tea (in packets and bulk) might also be added. Address S. H., 29 Rock Park, Rock Ferry, Cheshire.

A COMPETENT Assistant, of good address; must be a good Dispenser, and accustomed to Prescribe; age about 24: indoor. State age, height, salary, and if able to extract teeth (if qualified), when disengaged, with references, to J. A. Spargo, 1 Pier Terrace, Lowestoft. Enclose photo, which shall be returned.

ASSISTANT wanted (indoors). State age, references, salary required, and enclose photo, to Gilbert & Holl, 15 Commercial Road, Bournemouth.

WANTED, Junior Assistant; thoroughly competent Dispenser and good Counterman, and accustomed to good-class trade. W. Oldershaw, Chemist, Nottingham.

AN Indoor Assistant wanted in a light Retail and Dispensing business; state experience, age, height, and salary required. W. E., 192 Uxbridge Road, Shepherd's Bush, London, W.

AGENTS wanted with connection among makers of Patent Medicines, Druggists, &c., to sell superior Pastes for Labelling; liberal commission. Box 2, Pratt, 55 Market Street, Manchester.

IMMEDIATELY, a good Junior; age not under 20: must be quick and obliging. Apply, stating salary required (indoors), age, height, and references, enclosing c.d.v., to W. Jacobs, Medical Hall, Guildford, Surrey.

ASSISTANT, immediately, or as soon as possible; Minor qualification; age about 23. Apply, stating age, height, salary required (indoors), enclosing carte (to be returned), to J. W. Littlefield, Chemist, Ventnor, Isle of Wight.

ASSISTANT; indoors; about 21: one accustomed to good-class Retail and Dispensing; of gentlemanly appearance and address. Apply, with usual particulars, enclosing carte (to be returned), to Poole & Son, Newcastle, Staffordshire.

DISPENSER wanted (outdoors), in general practice, near London. Address, with particulars of previous engagements, salary required, &c., to T. W., care of Messrs. Wyman & Westwood, 25 Charles Street, Farringdon Road, London, E.C.

ENERGETIC Assistant for Retail and to assist occasionally at Dispensing counter; hours 8 to 8: no Sunday or night duty. Apply, personally or by letter, with full particulars, to "The Chemist," Harrod's Stores, Limited, Brompton Road.

WANTED at once, an Assistant, aged about 23, accustomed to good Dispensing and quick Retail. Apply, personally or by letter, stating age, height, references, and enclose photo, to C. C. Michie, 175 Kentish Town Road, London, N.W.

ROBERT WATTS, Pharmaceutical Chemist, 56 Fargate, Sheffield, will require a gentleman as Assistant, about 23 years of age, last week in May: must have exceptional references; enclose carte (to be returned), and state height and full particulars.

TRAVELLERS wanted to sell Carter's Universal Bird Seed in Liverpool, Birmingham, Newcastle, Bristol, York, and other large centres: must have good connections with first-class Chemists, &c. Apply to B. S., James Carter & Co., 237–8 High Holborn, London, W.C.

WANTED, an Assistant (indoor) of gentlemanly appearance and capable of taking occasional charge of a branch; good dispenser; state age, height, and salary required, carte if convenient (will be returned). Address, C. G. Breadner, Cheetham, Manchester.

EVENING.—Dispenser wanted, from 7 to 9 p.m., for dispensing work only; would suit a man with fixed employment during the day in the wholesale trade or otherwise; married man preferred. Address "Surgeon," The Dispensary, 50 White Lion Street, Pentonville, N.

AT ONCE, Junior, age about 20 or 21; Abstainer; One only kept; at liberty one evening weekly; no extra time can be spared for study; hours 8 till 10, and alternate Sundays from 6 till 10. Apply personally, or with carte, stating age, height, and salary, to Mr. Taplin, 91 Hampstead Road, N.W.

WANTED, an Assistant (outdoors); no heavy or dirty work, nor Sunday duty; ample time for study; would suit one reading for examination. State salary, age, full particulars, and references to W. Sheppard Poll, Pharmaceutical Chemist, Great Yarmouth. (Letters not answered in three days declined.)

TRAVELLER for Northern Counties (on commission) is required by a London manufacturer of fancy soaps and perfumery to work up and extend an established connection amongst chemists, &c.; must furnish proofs of already holding a good connection. Address, 32/40, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ASSISTANT (Indoors) wanted for May 1, for good retail and dispensing business; two assistants kept; send full particulars of references, experience, age, height, and salary required; photo, if sent, will be returned: a knowledge of postal and telegraph work would be considered an advantage. Carter, Chemist, Carshalton, Surrey.

WANTED, Competent Assistant (Minor) of good appearance and address; age about 24 or 25; accustomed to good country light retail and dispensing; London experience also would be considered an advantage, but not necessary; good salary given; also Junior required. State particulars, enclosing photo, to John Rae, Chemist, Newmarket.

SOLUBLE Essences for Aërated Water Makers.—The services of an Expert required, accustomed to modern processes on large scale; established firm want temporary or permanent assistance; if preferred, a pecuniary interest in the business might be arranged. Address in confidence, V. P., Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

DISPENSER for part time. R. R., 7 Queensbury Street, Essex Road, N.

JUNIOR; aged 21; 4 years' experience. W., 115 Mansfield Road, Nottingham.

PART-TIME (21); near some school. W. Russell, Langside, Victoria Road, Southsea.

MANAGER; good experience and reference. "Delpha," Hirst, Brooke & Hirst, Leeds.

LOCUM-TENENS or Temporary Assistant; 28; experienced. 4 Lancing Road, Ealing, W.

ASSISTANT (40); unqualified; temporary or permanent. A. N., 30 Union Street, Well Street, W.

AS Junior; aged 21; 6 years' experience; good references. A. Rogers, 3 St. James's Street, King's Lynn.

SURGEON'S Dispenser, Chemist's Assistant; aged 27; married; at once. Pearse, 4 Marylands Road, W.

OUTDOOR Assistant, view succession or otherwise; competent. "Minor," 9 Calabria Road, Highbury.

LOCUM-TENENS; qualified; references (40); town or country. Williams, 70 Ledbury Road, Bayswater, W.

AS Branch Manager or Assistant; nearly three years in last situation; good reference. W. H., 1 Parsons Mead, West Croydon.

JUNIOR; 6 years' experience Good-class Dispensing; time for study; London preferred. J. H. T., 126 Upper Street, Islington.

LOCUM-TENENS during absence; long experience; gentlemanly address; moderate terms. "Ph. Ch.," 39 Powis Square, W.

ASSISTANT; aged 24; 9 years' experience; now managing Branch; disengaged June 5. Apply, Smith, Beech Bank, Headingley, Leeds.

AS Manager or Senior: 14 years' good all-round experience; Minor; height 5 ft. 7 in.; outdoors. "Jujube," 13 Fermoy Road, Westbourne Park.

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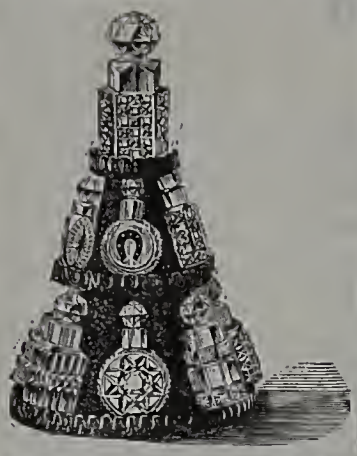

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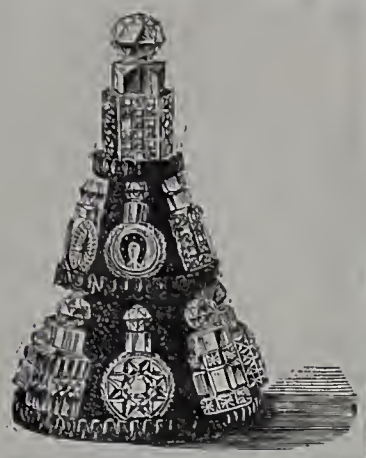

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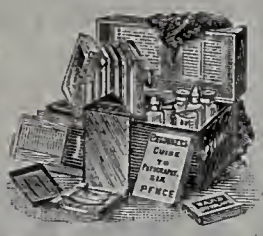

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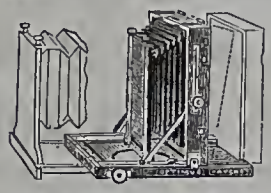

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For any information concerning Price, Samples, Directions for Use, &c., apply to Sole Vendor—

ANTOINE CHIRIS,

Distiller and Manufacturer of Essential Oils, Pomades, &c.,

GRASSE, FRANCE.

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(Late A. H. BOTWRIGHT. Established 1865),

MANUFACTURING OPTICIANS, Wholesale and for Exportation only, **13 SPENCER ST., CLERKENWELL, E.C.**

SPECTACLES AND **EYEGLASSES** Of every description.

FIELD, OPERA, AND **MARINE GLASSES, TELESCOPES, &c.**

MASON'S IMPROVED OPTOMETER (Registered), 17s. 6d. each nett.

Great saving of time by testing defective sight with this instrument. Sketch on application.

Specialities in Clinical Thermometers with indestructible indexes—half minute and lens front, &c.

OPHTHALMIC SURGEONS AND HOSPITAL PRESCRIPTIONS ACCURATELY PREPARED.

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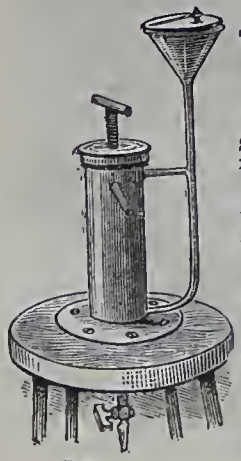


TEBBUTT'S COMBINED PERCOLATOR & PRESS,

For the Preparation of Tinctures, Fluid Extracts, & Concentrated Infusions,

Supplies a long-felt want, the methods hitherto employed being wasteful and unsatisfactory. The results of its use are an exhausted Marc and a superior Preparation, with absolutely no loss of Spirit

TESTIMONIAL.

Mr. Tebbutt. Tower Chambers, Moorgate Street, E.C., September 12, 1889.

Dear Sir,—We have much pleasure in telling you that your patent Percolator has given us very great satisfaction. We find that the marc, whether it be that of a Tincture, Fluid Extract, or Concentrated Infusion, is thoroughly exhausted after percolation is complete, also that there is a great saving of spirit.

We may add that at the last meeting of the British Medical Society, held lately in Leeds (August, 1889), we exhibited our Fluid Extracts made with your Percolator, and they attracted a great deal of attention by their excellence.—*Vide* "British Medical Journal," Sept. ; and "Provincial Medical Journal," Sept. 2

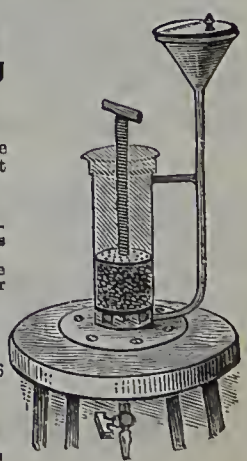
Yours truly, CHAS. GREEN & CO.

Prices with Stand complete:—

To make ½ gall. of Tincture, such as Gentian, 15/6. To make 1 gall. of Tincture such as Gentian, 22/6

Orders should be accompanied with a remittance, addressed to

FRANK TEBBUTT, 22 Langdon Rd., Upper Holloway, **LONDON, N.**



"PUMILINE" SOAP.

Magna est Veritas et Prævalebit.

IT IS CLAIMED FOR THIS SOAP:

THAT it is made of the best and purest materials skilfully incorporated and properly neutralised. It therefore contains no free alkali, or alkali which can be set free.

THAT it is superfatted with Lanoline, and is not liable to decomposition like soap containing so-called "cream," but is stable, soothing, and emollient.

THAT the Pumiline contained in this Soap is a fine essence, the effect of which is to ensure a healthy functional activity of the skin.

Professional men can hardly be expected to waste their valuable time in delusive tests, and no better evidence of the validity of the claims advanced can be wished for than the testimony of adepts. In this respect "Pumiline" Soap comes out triumphant, seeing that all the leading analysts to whom it has been submitted for examination are unanimous in recognising its merits. A single trial will, however, prove more convincing than even the most official assurances, and this trial we solicit.

"Pumiline" Soap is a masterpiece of the soap-maker's art, and can dispense with the meretricious aid of fancy designations which, in so far as they signify anything, are misleading.

The following is the report of an eminent Analyst, and will speak for itself:—

The Laboratory, Billiter Square, E.C.

I have analysed samples of Stern's "Pumiline" Soap, and find it to be composed as follows:—

Combined Fat	70·7
Lanoline	10·0
Combined Alkali	7·8
Free Alkali	00 0
Moisture	7·0
Pumiline	4·5
	100·0

The Soap, therefore, consists of good dry soap, with which are intimately incorporated 10 per cent. of Lanoline and 4·5 per cent. of Pumiline. The materials used are of the best quality, and as it contains remarkably little moisture it wastes slowly and is economical.

"Pumiline" Soap is in every way an excellent article; it lathers exceedingly well, renders the skin soft and supple, while the Pumiline imparts a delicate fragrance, at the same time acting as a mild antiseptic.

"Pumiline" Soap fulfils in every way all the requirements which may be made of a high-class Toilet and Sanitary Soap.

(Signed) OTTO HEHNER, Public Analyst.

Price to the Trade per 1/6 box of 3 tablets, 15/- per dozen boxes.
" " " 1/- tablet..... 9/- " tablets.
SUBJECT TO AN ADDITIONAL DISCOUNT.

G. & G. STERN, 62 GRAY'S INN ROAD, LONDON, W.C.

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FOR DISPOSAL

Dental.

Complete set of 8 dental forceps in case, equal to new, 25s., worth double, or exchange Minor books. "Drugs," 27 George Street, Worcester.

Proprietary Articles.

Horgusen's compound glycerine balm, perfectly clean and in good condition, half retail price. Apply, Fred Pickles, 128A Gray's Inn Road Bldgs., Gray's Inn Road, W.C.

Drugs and Chemicals.

4½ gross Chian turpentine pills. Morrison, Chemist, Cambridge Street, N.W.

Fine senna 7d. lb., 28 lbs. 6d.; now camomiles same price; send stamp for sample. Show & Co., Doncaster.

Educational.

Jahr's "Manual Homœopathic Practice;" Hull's third American edition, bound; *Imperial Journal*, 2 vols., profusely illustrated, bound; offers or exchange. Galbraith, 52 Paisley Road, Glasgow.

"British Pharmacopœia," 1867; Squire's "Companion," 10th edit.; Pereira's "Manual"; Tome's "Dental Surgery"; Fownes "Chemistry"; Attfield's "Chemistry," 6th edit.; Martindale's "Extra Pharmacopœia," 3rd edit.; Beasley's "Receipt Book," 5th edit.; Pereira's "Selecta"; offers? Rainey, Chemist, Spilsby.

Literature.

Offers for *British Medical Journals*, several years past? Pratt, Pewsey.

Cooley's "Cyclopædia of Practical Receipts," 7s. 4 Newstead Grove, Nottingham.

Chemist and Druggist, 1836, 1837, 1838, cash 10s. 6d. or exchange. Stead, Freshfield, Liverpool.

Squire's "Companion," 10th edition, 3s., 13th, 4s. 6d. M. Valentine, 2 Frederick Crescent, Brixton, London, S.W.

"Martindale," 3rd edition, 2s.; "Squire," 14th edition, 5s.; new condition. Harrimon, Brownlow Hill, Liverpool.

Pharmaceutical Journals and *Chemist and Druggist*, recent years, about a hundredweight, at 7d. per lb. Floyd, Bury-St. Edmunds.

Formulæ.

Reliable recipes. 6d. each; full set of 130 neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

Latest Novelty.—Extraordinary Success.—Sweet Solid Perfume, most enchanting, delicious bouquet; will last for years; 2d. blocks; half profit; over £0 sold (retail) in two days; sells itself; quickly and easily made; recipe, with full instructions, 2s. 6d.; sample dozen free 1s. 6d., or recipe and sample dozen free 3s. 6d. Tom Brooks, Chemist, Hornsey, N.

Money Makers.—Sanitary Furniture Cream; produces, with little labour, brilliant lasting polish, costs 4d. per lb., no better made; Corn Cure, worth trying when others fail, perfectly safe; Ringworm Specific, never fails, cures under four days; White Oils, inseparable, inexpensive, equal any sold; The Specific, magic cure, instant action, very reliable; recipes, with instructions, post free 7d. each, 3 for 1s. 6d.; list of 400 free. Tom Brooks, Chemist, Hornsey, N.

Shop Fittings.

Counters, counter and wall cases, and other fittings. Particulars, Kendall, Blyth.

Entire stock mahogany fittings, mahogany counter 25 ft., &c., of chemist retiring; must sell, no reasonable offer refused. 61/2.

82 gold-labelled mahogany front drawers, perfect condition; best cash offer taken; must be sold. W. Baughan, Electrician, Charlbury.

Counter-case, bent-glass, 6 ft. long, as Maw's A 18 good as new, price 5l. 10s. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Drawers, 12-foot run, very good, bevelled-edged glass labels and glass knobs, price 8 guineas. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Dispensing screen, with circle sponge case and counter with plate-glass cupboards under, the handsomest in London, 7 ft. long, price £0l., worth double, equal to new. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Shop rounds, 500 second hand, 7s. 6d. per doz.; also carboys, specie-jars, sponge-cases, and a large quantity of fittings very cheap. Philip Josephs, 54 Old Street, London, E.C.

Counters, 2, with mahogany tops, both have dispensing-counter at end, price 3l. and 5l. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

12 white earthenware shop-jars, 4 lbs, fig. 13, Maw, price 10s. 6d.; 18 N. M stoppered bottles, 30 oz., price 6s. (shop-rounds). Norman, 70 Tavistock Street, Bedford.

Glass bottles, job lines.—About 50 gross 3-oz. pale green bottles for corks, suitable for pomade, vaseline, or furniture cream, 4s. per gross; 3 gross ½-pint (repnted) green glass syrups, 7s.; 2 gross pint ditto, 15s.; 3 gross 1-pint white glass syrups, 20s.; 3 gross 2-oz. white globe-necked panels, 7s. Hearn, Bottle Works, 381 Kingsland Road, London.

Spanish mahogany counter, panelled front, trusses, Spanish mahogany top, 4l.; mahogany prescription desk, 13s.; marble-top soda-water stand, 24 in. by 20 in., mahogany pillar and plinth, 2l. 5s.; ebonised O. G. shaped case, reflector plate-glass shelf, velvet-lined bottom, 2 ft. 6 in. by 1 ft. 4 in., 1l. 10s.; several nests of drug drawers; 17 1-gallon green carboys, gold labels, large japanned caps, stoppered, and 4 3-quart, 1l. 10s. W. Hawke & Son, Wild Court, Great Wild Street, Drury Lane, London, W.

Job line shop-rounds, wide and narrow mouths, hand made, 4 oz., 3s.: 8 oz., 4s.; 20 oz., 6s.; 30 and 40 oz., 8s.; larger sizes, 10s., doz.; blue plug stoppered syrups, 8s. and 12s.; specie jars less than half price. 10 in., 2s.; 12 in., 3s.; 18 in., 5s.; with scrolls, 18 in., 7s. 6d. and 10s.; royal arms, from 25s. each, good as new; carboys, 1 to 10 gall., 2s 6d. to 20s. each. Natali, 184 Aldersgate Street.

Second-hand bent plate glass counter-cases, as Maw's A18, 6 ft., 115s.; 7 ft., 135s.: good as new; ebonised, as A8, plate glass, 3 ft., 36s.; 4 ft., 48s.; tooth-brush cases, bent plate glass, and 3 polished edge glass shelves, 30s. each; sponge cases, A41, 50s., and A43, 100s.; wall-case, as A88, 4 ft. 6 in. long, 9l.; dispensing screen and counter, plate-glass tablet, handsome, 4 ft. 6 in., 3l. 10s., and one 6 ft.; also several nests mahogany-fronted gold labelled drawers, cheap. Natali, 184 Aldersgate Street.

Mahogany-top counter, panel front, with trusses, about 6 feet; nest of 9 deal drawers, 16×18 in. each, under counter; mahogany upright glass case on counter; 18 ointment-jars (blue and white); gold labels; pill-cutter (24 pills); large iron mortar and pestle; bell-metal mortar; nest pill-drawers; Wedgewood mortar; glass mortar; label drawer with sundry dispensing-labels; quantity stoppered bottles, various; marble ointment slab; brass scales; tincture-press; specie jar and stand; 8l. for the lot. Goods on view at Deptford, S.E. Write for appointment to R. H., 1 North Terrace, Dorney Heath, Kent.

Special opportunity.—Shop-rounds, new hand made, English, stoppering warranted, 10 oz., 4s. 6d.; 20 oz., 5s. 9d.; 32 oz., 7s; 40 oz. 8s. per dozen, wide or narrow mouth; gold-labelling, best style, any name, 2s. 6d. per dozen extra; shop-jars, dome or canopy, very cheap; pill-machines, best quality, 5-grain, for 24, 15s. 6d.; also shop-fittings, bargain; state wants. "Drug," 83 Camphell Road, Stoke-on-Trent.

Miscellaneous.

2 cwt. of Crown Company cattle spice, Hull what offers? 60/34.

Poppy heads, 5s. 100; bag 6d.; sample 3d.; small for crushing, 1d. lb.; bags 6d. Connor, Chemist, Doncaster.

A bargain.—A four-gallon still with two-gallon interchangeable water-jacket, iron stand for gas complete. Apply, 21 Nassau Street, W.

Dozen 8 and 10 inch pallette-knives, 10s. 6d.; dozen 6d. pofts, 2s. 6d.; gross black teats, 5s.; all best quality. Slater, Chemist, Beeston Hill, Leeds.

Best black rubber tubing for feeding-bottles, 6s. 9d. lb.; boxwood unions, 5 gross, 2s.; finest satin gutta-percha tissue, 6s. 6d. lb.; all free; cash with order. Buckley, Lees, near Manchester.

Stone bottles, white, 5-oz., 7s. 6d., 1-oz., 2s. 6d.; narrow neck, suitable for furniture cream, &c.; sample 6d. Mangnall, Chemist, Manningham, Yorks.

Pure honey, light colour, jars holding about 20 lbs, 6d. the lb., jars and baskets free; genuine beeswax, good colour, 1s. 3d. lb.; samples three stamps. Johnson, Godalming, Surrey.

Job lots of mineral water and other bottles; 100 gross split lemons; 50 gross 10-oz. square dark coffee extracts; 30 gross cherry brandy quarts; what offers to clear? 24/90.

Pill-machines, in good condition, 7s. 6d. to 12s. 6d. each; tincture-press, 1 gall., 15s. Natali & Co., 180 and 184 Aldersgate St., London (nearly opposite Maw's). Established 1863.

What offers for 3 × 10/6 Wratten & Wainwright's A ordinary bromide solution; 12×4-lb. stone jars with patent lids; quantity of second-hand shop-rounds; 1 pair Avery's counter-scales? Illsley, Chemist, Barnard Castle.

Microscopic objects, gorgeous polarising, brilliant opaque and entertaining slides, 3 by 1, suitable for evening exhibition, 5s. dozen, list free; 4 dozen slides sent, carefully packed and postage paid, for 21s, to Australian Colonies, Belgium, Canada, France, Germany, India, New Zealand, South Africa; microscope accessories wanted in exchange. Henry Ebbage, 344 Caledonian Road, London.

WANTED.

"London Pharmacopœia," any edition. Harrison, 71 Westbourne Grove, London, W.

Several nests of old drawers, fair condition. 60/34.

Dispensing counter-case similar to Maw's fig. 56. 55/27.

A good second-hand nest of drawers, cheap. Jones, Chemist, Holywell.

2nd vol. Allen's "Commercial Organic Analysis." 4 Brunswick Place, Leeds.

Chemist and Druggist for February 18 and 25, 1888. Richardson, Chemist, Dudley.

Small dipping-tub for lambs; must be in good condition. Judge, Bourn, Lincolnshire.

Formulæ of good toilet specialities. Particulars to W. Lewis, 7 Bishop's Road, London, W.

"Enterprise" tincture-press. State condition, size, and lowest price, to Appleton, Chemist, Sheffield.

In perfect working order, a second-hand Priestman's one-horse power oil-engine. Apply, J. F. C., 37 Walbrook, London, E.C.

Chemists' and Druggists' Diary for 1890. Send price, postage paid, to 33/18, The Publisher, Chemist and Druggist, 42 Cannon Street, E.C.

Mortar and Pestle.—A large mortar and pestle, capacity for mixing about 1 cwt. of powder. Apply, F. A. A., 18 Central Road, Withington, Manchester.

Safety bicycle in good condition, by good maker; will give set of tooth-instruments (10) in splendid condition; good telescope and cash; approval; deposit. Cooper, Selby.

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ALSO MOIST ANTISEPTIC DRESSINGS & ABSORBENTS.

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We are now preparing Mustard Plasters after an entirely New Process.

Mustard Plasters have always given some trouble to both Physician and Pharmacist, by reason of decomposition from age, thus becoming inert. After years of careful manipulation we have been able to overcome this difficulty, and the Mustard Plasters prepared by us are guaranteed in every way.

ON APPLICATION WE WILL MAIL TO ANY CHEMIST'S ADDRESS A SAMPLE OF OUR

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A comparison of which with any other brand will show them to be much superior.

THEY WILL KEEP BETTER.

THEY WILL GIVE BETTER SATISFACTION TO YOUR CUSTOMERS.

THEY ARE STRONGER THAN ANY OTHER MAKE.

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BELLADONNA PLASTERS

(WITH BORACIC ACID).

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We have succeeded in greatly increasing the therapeutic value of Belladonna Plasters.

First.—By preparing the mass in a manner calculated to promote a more rapid absorption of the incorporated drug.

Second.—By employing a more reliable extract of the drug than is commonly used.

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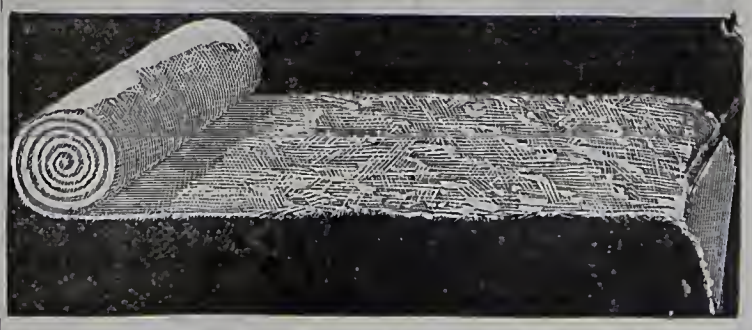
Samples to any Physician's or Chemist's address on application.

ABSORBENT COTTON IN EVEN SHEETS
Rolled with Tissue Paper between them to prevent felting.



Cotton in this form is as easily applicable as an ordinary cloth bandage. Its advantages can be seen at a glance. Supplied in all sized Packets from 1 oz. to 1 pound.

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These beautiful little lozenges, perfectly spherical in form, weighing about 400 to the ounce, of exquisite flavour and great strength, are the most popular and perfect breath lozenges ever introduced; unlike the ordinary flat lozenges, these little Pearls have no angles to attract dust and become soiled with a slight handling, consequently they can be carried in the purse or pocket, and are altogether more portable than ordinary lozenges.

The unique appearance and flavour of this novelty quickly ensured a large sale, and its success, as might have been anticipated, quickly brought to the front some worthless imitations, the sale of which can only result in disappointment to all concerned.

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are the only genuine Pearl Cachous: they are not only better looking, but are double the strength of the imitations, and buyers are therefore requested to order the original, and thus ensure a perfect article. They are elegantly put up in attractive one-pound bottles, and are an ornament to any Pharmacy. The following flavours are always in stock—

Rose.	**Jockey Club.**
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Price 2s. 9d. per lb. in 1-lb. bottles.

Eight bottles sent carriage free to any part of the Kingdom.

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CHRISTY
v.
MOTTERSHEAD.

NOTICE OF INJUNCTION.

Messrs. THOS. CHRISTY & CO. give notice that by a Judgment of the Queen's Bench Division of the High Court of Justice, in an action between Messrs. THOS. CHRISTY & CO., Plaintiffs, and Messrs. MOTTERSHEAD & CO., of No. 7 Exchange Street, Manchester, Defendants, Messrs. MOTTERSHEAD & CO. were **perpetually restrained** from **making,** selling, using, or advertising the sale of an article known as Mottershead & Co.'s Menthol Inhaler, or otherwise infringing a Patent called Cushman's Patent Inhaler. Messrs. CHRISTY & CO. desire that it should be understood they entirely believe the statement of Messrs. MOTTERSHEAD & CO., that the infringement complained of in the above-mentioned action was purely inadvertent, and that so soon as the attention of Messrs. MOTTERSHEAD & CO. was called thereto they at once admitted the infringement, and consented to submit to the above Injunction.

Dated 23rd April, 1890.

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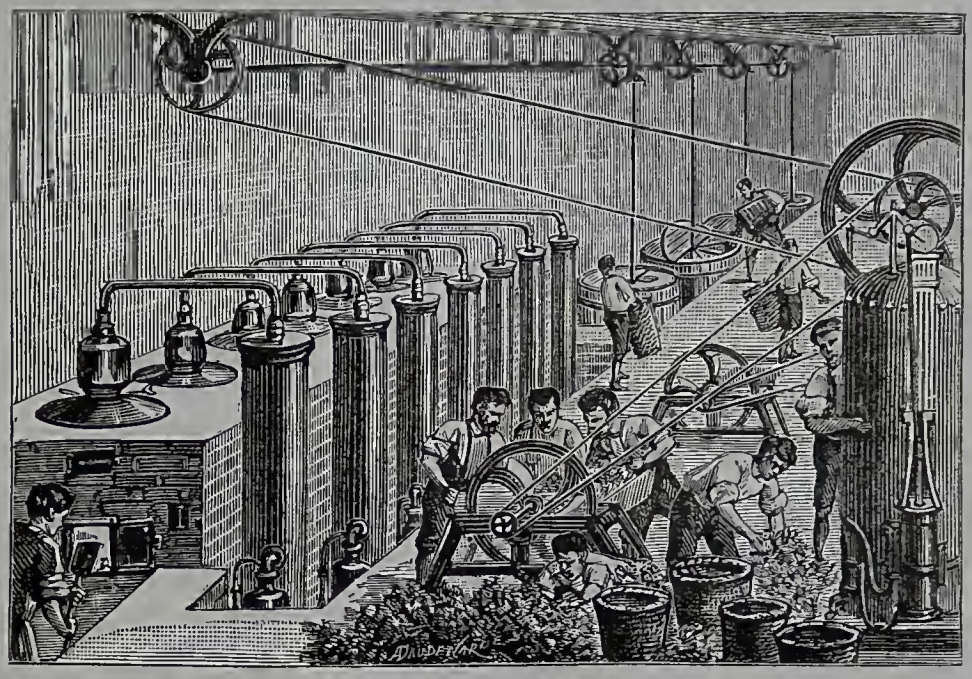
AGAINST THROAT AND CHEST AFFECTIONS, BRONCHITIS, INFLUENZA, RHEUMATISM, GOUT, AND SCIATICA.

THE pine trees are carried from the high altitudes (5,000 to 6,000 feet above sea level) direct to the distilleries by a specially-constructed *set of wires*. Without such set of wires it is not possible to produce the pure Pinus Pumilio, because the transport of the pine trees on men's shoulders is too expensive. On the Continent there does not exist a distillery of any standing making pure Essence and Extract of Pinus Pumilio upon scientific principles, except the distillery of JOSEPH MACK. Thousands of testimonials have been received. The best testimonial is shown by the fact that at MACK'S Establishment at Reichenhall, near Salzburg, last summer over 7,000 persons (sent by physicians from all parts of the globe) were successfully treated. This is the best guarantee for MACK'S superior distillation over all other pine.



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In Germany and Austria, ask for "MACK'S LATSCHENKIEFERN PRODUCTE."
In all other parts of the Continent—as France, Italy, Belgium, Holland, Russia, Turkey, Greece, Italy, &c.—ask for "PIN D'AUTRICHE DE MACK."
In the United Kingdom and Colonies, ask for "MACK'S AUSTRIAN PINE," which Mr. JOSEPH MACK has specialised as follows:—

MACK'S ESSENCE. Used in Inhalation in cases of Diphtheria, serious Affections of the Voice, and Impaired Respiration; in Friction against attacks of Gout. Large bottles 3*s*.

MACK'S ANTI-RHEUMATIC BATH. For Rheumatism, Gout, and Sciatica. Per bottle, 1*s*. 6*d*.

MACK'S SOLUTION. For Friction, Massage, and Vaporisation. After Mack's Bath, by rubbing with the Solution on the affected parts.

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MACK'S JUJUBES (Pectoral Paste). For Coughs, Colds, and Affections of the Throat. Per box, 1*s*. 6*d*.

MACK'S AUSTRIAN PINE SANITARY and TOILET SOAP is particularly beneficial in cases of Gout, Rheumatism, Skin Affections, Hay Fever, and Colds in the Head. Per box of Three Cakes, 1*s*. 6*d*.

JOSEPH MACK'S PRODUCTS are analysed and examined by the highest authorities; introduced in all the Hospitals of the Continent, and also in several Hospitals in London; were admired at the last Medical Exhibition at Brighton (see *The Lancet*, Dr. Medows); received the highest honours; and Gold and Silver Medals have been awarded at the International and Pharmaceutical Exhibitions—viz., Vienna, Paris, Frankfort, Philadelphia, &c

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We allow any Chemist and Druggist a discount of 25 per cent. on the Retail Prices.

A SAMPLE BOTTLE AND PAMPHLETS FREE TO THE MEDICAL PROFESSION ON APPLICATION.

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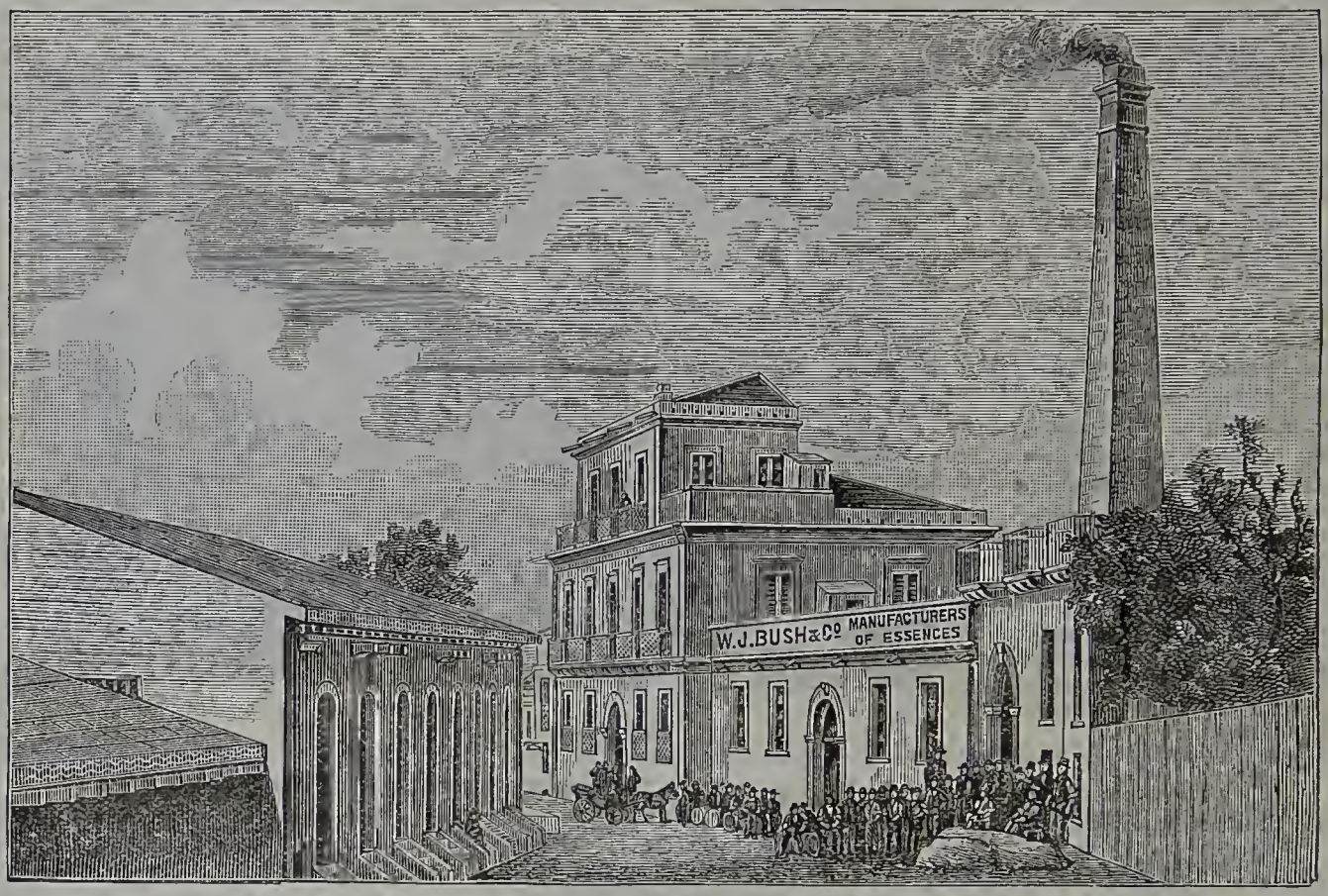
DIRECT FROM THE MAKERS.

SAVE INTERMEDIATE PROFITS AND BUY PURE ESSENCES!



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By making the Essences ourselves on the spot, we were enabled last season to offer to the Trade **a quality that had never been seen before in this or any other market!** Notwithstanding the great opposition we had to encounter, combined with the somewhat libellous statements that were made by our competitors, both here and at Messina—caused through common jealousy—the trade has appreciated our efforts and our success in being able to offer them an Essence so superior in quality, that **never before have we sold so large a quantity.** Through this fact we are pleased to inform our friends that it has been necessary for us to take another manufactory in **Villaggio Gazzi, Messina,** which is no less than **three times the size of the one in Strada Antico Cimitero,** a portrait of which you will see above.

W. J. BUSH & CO., ARTILLERY LANE, LONDON.

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GREAT REDUCTION IN PRICE.

We have recently been entrusted with a most important Agency for the above-named goods. Our Principals are the best known firm in Paris, and the Syphons are undoubtedly the cheapest and strongest in the market. The tops are made of pure English Tin, guaranteed free from lead. The Seltzogenes are made on the well-known "Fevre" system, and each one is thoroughly tested before being sent out.

WE CAN GIVE TO LARGE AND SMALL BUYERS EXCEPTIONALLY LOW PRICES.
PLEASE WRITE US AT ONCE FOR PRICES, STATING QUANTITY OF EACH KIND REQUIRED

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ARE GUARANTEED TO BE THE FINEST IN THE MARKET

ESSENCES OF GINGER, LEMON, ORANGE, &c., &c.

HOP ALE & GINGER ALE ESSENCES.

Besides Gold & Silver Medals the above Essences have obtained the Highest Testimonials from all the Medical Journals, and from the Principal Trade Journals in this and other Countries.

PRICE LIST FREE ON APPLICATION.

WHYS, MANUFACTURING CHEMIST. BEVERLEY ROAD. HULL.

A WONDERFUL SUCCESS!!

NON-INTOXICATING BEER

Made from MASON'S Original

EXTRACT of HERBS

(REGISTERED.)

Composed of Yarrow, Dandelion, Comfrey, & Horehound

ENLARGEMENT OF SIZE.

A Sixpenny Bottle makes EIGHT GALLONS of

HERB OR BOTANIC BEER

A NON-INTOXICATING BEVERAGE

Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most perfect substitute for Alcoholic Drinks ever discovered, for either Summer or Winter.

BEWARE of mean and fraudulent imitations.

BEWARE of others copying our title.

MASON'S is the original and only genuine.

MASON'S is a Special Compound entirely from Herbs.

NO OTHER EXTRACT MAKES BEER LIKE IT.

Sold in Bottles at 6d., 1/, & 2/ each, with directions.

MASON'S WINE ESSENCES

Make Temperance Wines in a few minutes.
Ginger, Orange, Lemon, Raspberry, Black Currant, &c.
These are having a very large sale now, and are extensively advertised.
Sold in Bottles at 6d, 1s., and 2s. each.
Quotations on application.

SOLE INVENTORS & MANUFACTURERS: NEWBALL & MASON,
Manufacturing Chemists and Botanic Druggists. NOTTINGHAM

KINMOND'S

Royal Leamington

APNEUMATIC

TABLE WATERS

Were first supplied to H.M. the Queen in 1856, and to H.R.H. the Prince of Wales in 1862.

KINMOND'S

GINGER ALE,

AND ALL THEIR OTHER WATERS,
Are UNRIVALLED for PURITY and QUALITY.
In Ordinary Bottles and Syphons.

MANUFACTORY—

LEAMINGTON.

Send for Trade List and Compare Prices.

BY ROYAL LETTERS PATENT.

HASSALL & CO.'S

PHOSPHO-CITRIC ACID

Is the Best, Purest, and most Economical Agent for Acidulating all Saccharine Beverages.

Price only **10***d.* per lb., in 9 and 18 gallon casks; **1***s.* per lb. in small quantities.

One Ounce Measure is equal to One Ounce of Citric. It produces a higher class Beverage, and shows an economy of between £6 and £7 per cwt. We do not ask for an order, we merely solicit the favour of a trial.

3-oz. Sample for Postage (3 stamps), or 14 lbs. on approbation.

PAMPHLET GRATIS.

UNSOLICITED TESTIMONIALS.

We are pleased to be able to testify that your Phospho-Citric Acid is satisfactory under the most severe trials. We have placed Manufactured goods in which your Acid was used in a refrigerator for months, and also for nine months in a stove in which the temperature stands at over 150° day and night, and the bottles when examined to-day were as bright as the day they were put in. ———, London.

Lemon Street, Aberdeen.

I have pleasure in bearing testimony to the fact that first-class waters are produced, with greater body and finer fruity flavour, at half the cost of Citric; and further that your Acid is free from all traces of LEAD, generally found in the crystals.

I am persuaded that your Acid will ultimately command the Mineral Water Trade. Yours faithfully, WM. THOMSON.

"And may I also be permitted to add my testimony to the excellence of your Phospho-Citric Acid; I consider it far and away preferable to Citric." C. H. ORTON, Stoke Golding.

FERMENTATION.

When Fermentation is present, Saccharine Beverages made with this Acid will keep sound and bright several days longer than those made with Crystal Acids.

HASSALL & CO.

YORK ROAD, KING'S CROSS, LONDON.

TELEGRAMS:—"REMPUJARON LONDON."

JEWSBURY & BROWN'S
(MANCHESTER)

SPARKLING TABLE WATERS,
UNRIVALLED FOR PURITY AND QUALITY.

SODA WATER.
SELTZER WATER.
POTASH WATER.
LITHIA WATER.
SIMPLE AËRATED WATER.

LEMONADE.
GINGER ALE.
QUININE TONIC.
GINGER BEER.
HOREHOUND BEER

EXTRACTS FROM ANALYTICAL REPORTS.

"The examination of the Waters which I have made has satisfied me that they have been prepared with the greatest care, and are of excellent quality."
FRANCIS JONES, F.R.S.E., F.C.S.

"On the whole, I have no hesitation in stating that your Aërated Waters are of the highest standard of purity which is practically attainable."
LOUIS SIEBOLD, F.I.C., F.C.S.

"The Lemonade is, for flavour and general excellence, superior to any similar compound which I have examined, and contains no acid but *Citric Acid*.

"I took a sample of the water used in your manufactory, in the preparation of the Aërated Waters, and found it, as was the case with the completed compounds entirely *free* from lead, copper, *or any injurious* matter whatever."
C. ESTCOURT, F.C.S., F.C.I.

J. & B.'s Syphons are mounted with PURE BLOCK TIN, thus ensuring absolute immunity from dangerous metallic contamination

CARRIAGE PAID AND ON RETURNS.

113 MARKET STREET, and 44 DOWNING STREET, MANCHESTER.

REGISTERED TRADE MARK
CONSTANCES AERATED INVIGORINE
H. E. Constance

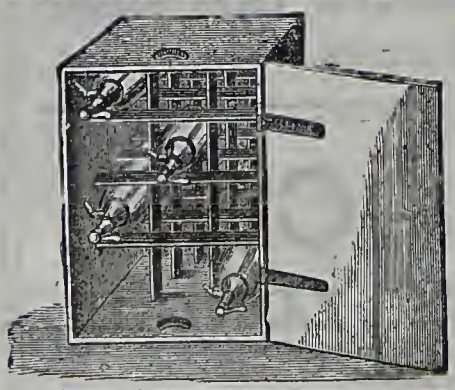
"INVIGORINE"
(REGISTERED TITLE).

THE NEW AËRATED TONIC
Pleasant, Refreshing, and Invigorating.

Successful Wherever Introduced
Specially Useful in Hot Climates.

Retail 2/6, Wholesale 24/- Doz. net,
Through the Wholesale Houses or of
THE "INVIGORINE" MANUFACTURING CO.
114 Leadenhall Street, LONDON, E.C.

JOHN OWEN, JUNIOR,
PACKING CASE MANUFACTORY AND STEAM SAW MILLS.
ESTABLISHED 1840.
37 & 38 MINORIES, LONDON, E.C.



MANUFACTURER OF
Cases of every description for Home use and Exportation.
Wine Laths, Oak and Deal.
Mineral Water Bin Cases and Trays.
Bottle Crates. Straw Envelopes.
Cases Lined with Tin, Zinc, Copper, &c.;
ALSO MANUFACTURERS OF THE
"Acme" Incubator & Poultry Appliances.

PRICE LISTS FORWARDED ON APPLICATION. *EXPORT ORDERS RECEIVE SPECIAL ATTENTION.*

SELTZOGENES.

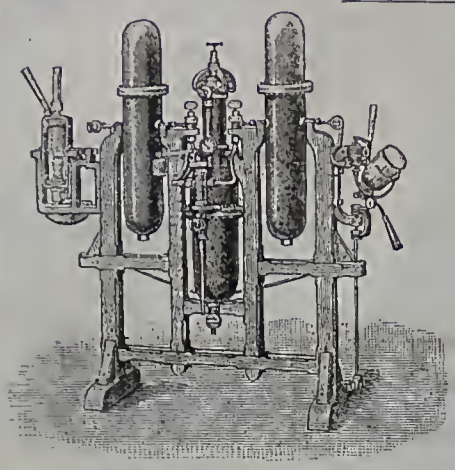
Before placing their season's orders, Chemists are invited to write to us for quotations, as we are offering these goods at very Cut Prices. Having made special arrangements with a firm in Paris (previous to the advance in price of glass), we are enabled to quote Lower than any House in the Trade, and shall be pleased to furnish prices on application.

When writing, Chemists should state the probable quantities required. Orders can be booked now, and deliveries extended over several months if wished.

THOMPSON, WALTERS, HOLE & CO., LIM.

CURTAIN ROAD, LONDON, E.C.

A. LOZÉ & CO., LD., 281 WEST DERBY ROAD LIVERPOOL.



INDISPENSABLE TO CHEMISTS.

THE ONLY PRACTICAL SODA WATER MACHINE.

Self-working by Chemical Action. No Skilled Labour.

NOT LIABLE TO GET OUT OF ORDER OR NEED REPAIRS.

Produces the Purest Aërated Water made.

Machines, in two sizes, at 25 guineas and 30 guineas. All complete. With the smaller a lad can make easily in ten hours twenty dozen Syphons or 100 dozen Bottles; with the larger, thirty dozen Syphons or 175 dozen bottles.

County Laboratory, 30 Brownlow Street, Liverpool, October, 1889.

I have examined during the present year the Machines for making Aërated Waters invented by Mr. Lozé, and I have formed a very high opinion of them. No lead is found in any part which comes in contact with the water, and the process is one which produces absolutely pure Carbonic Gas. Accordingly I find that the effervescing water produced is free from every injurious metal or contamination, and has a better flavour than that produced in the ordinary way. J. CAMPBELL BROWN, D.Sc.

Chemical Laboratory, 20 Albert Gate, Manchester, 21st August, 1889.

Gentlemen,—At your request I have visited the works of Messrs. A. Lozé & Co., of Prescot Street and Tuebrook, Liverpool. I have inspected his patented Apparatus for producing Aërated Waters, and have analysed the Aërated drinks manufactured. The results of analysis quite justified the inferences which were drawn from a knowledge of the materials used. Thus, instead of using ordinary whiting (as the source of carbonic acid gas), which gives off small quantities of offensive gases when acted upon with acid, Mr. Lozé uses one of the pure soluble bicarbonates of either Potash or Soda; the use of this salt enables the apparatus to be much simplified in form, as no gas washer is required, but the carbonic acid gas may be led at once into the liquid in the Saturating Cylinders. The Aërated drinks produced are of very high quality, both as to purity and as to Aëration, and the apparatus possesses the merit of extreme simplicity and efficiency.—Faithfully yours, C. ESTCOURT, F.I.C., F.I.

Messrs. A. Lozé, & Co., Limited. Ditton, 10th April, 1890.

Dear Mr. Lozé,—I am pleased to inform you that I have been able to work the Machine sold to me by you without previous knowledge. With your patent Turnover I can bottle Patent Stoppers at the rate of two dozen per minute. Syphons and Corked Bottles I can fill much quicker than what you advertise the Machine to do.

The Aërated Waters produced have been sampled by a number of gentlemen, and pronounced by them to be of a most excellent quality.—Wishing you every success, I remain, yours truly, ROBT. J. GOW, F.C.S.

GOLD MEDAL, Amsterdam, 1883. DIPLOMA OF HONOUR, Paris, 1887

GUÉRET FRÈRES,

MACHINISTS, PATENTEES,

PARIS—72 BOULEVARD DE LA GARE, 72—PARIS.

SYPHONS WITH SHORT LEVER, with Metal Tops of Pure Tin, carefully mounted, and the glass of the *first quality*.

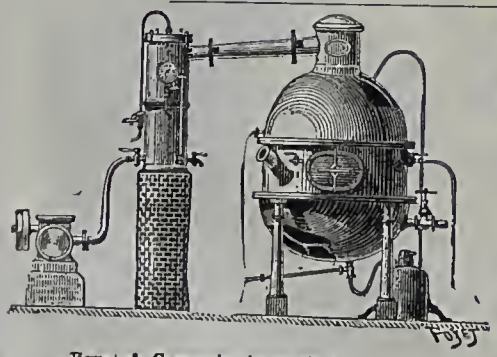
GAZOSELTZ, for the instantaneous production of Aërated Beverages at table. Anyone can use them.

"CONTINUOUS PROCESS" Apparatus complete, guaranteed without flaw in construction, possessing perfect action, and tested to a high pressure, while fulfilling every desirable condition of economy and sanitation.

OUR GENERAL CATALOGUE AND PRICE LIST WILL BE SENT FREE ON APPLICATION.

APPARATUS for DISTILLING & CONCENTRATING in VACUUM

EGROT & GENEVOIX'S SYSTEM, PATENT.



Egrot & Genevoix Apparatus.

STILLS & PANS FOR CHEMISTS, DRUGGISTS, &c.

RECTIFYING APPARATUS

Egrot's System, Patent,

FOR BENZOLE, ETC.

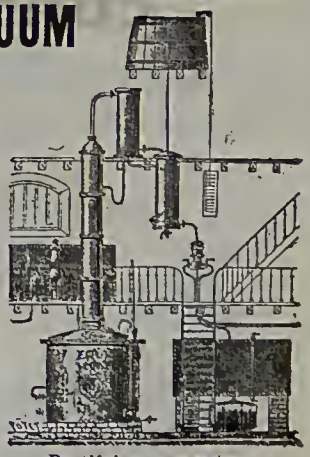
EGROT, Chevalier of the Legion of Honour, MANUFACTURING ENGINEER,

19, 21 & 23 RUE MATHIS, PARIS.

Firm founded 1780.

PARIS EXHIBITION, 1889—Beyond Competition as Member of Jury.

PRICE LIST FREE.



Rectifying Apparatus.

HIGHEST AWARD AT THE INTERNATIONAL EXHIBITION, LONDON, 1885.
TRADE MARK Registered May 21st, 1867.

"THE PIONEER TEMPERANCE BEVERAGES."—*Ch. Eng. Temp. Chron.*

BECKETT'S FRUIT SYRUPS & CORDIALS

TRADE W.B. MARK

MILD DRINKS.
Cherry. Raspberry. Strawberry. Lime Fruit. Black Currant. Lemon. Orange. Jargonelle Pear. Pineapple. Raspberry Vinegar. Orange and Quinine.

HOT DRINKS.
Winterine. Honey Liqueur Aromatic. Black Currant Gingerette. Ginger Lemon Peppermint. Clove. Elderberry. Syrup of Hops Lime Fruit Cordial. Raspberry Cordial.

"First-class beverages."—*The Grocer.*
"Have an established reputation."—*Nonconformist.*
"That Beckett's Fruit Syrups are equal to what their proprietor claims for them is proved by the fact that they are largely used in Coffee Houses throughout the country."—*Coffee Public House News.*

"Delicious beverages."—*Scottish Good Templar.*
"Beckett's Fruit Syrups are not to be excelled."—*Anti-Adulteration Review*
"All Mr. Beckett's preparations are most tastefully bottled and labelled, and their bright appearance makes them ornamental to the shelves of the Confectioner and Temperance Hotel-keeper."—*Good Templar Watchword.*

Analytical Reports from GRANVILLE H. SHARP, Esq., F.C.S.; G. BOSTOCK, Esq., F.C.S.
Price Lists, Testimonials, and other information sent post free on application to the Manufacturer—W. BECKETT, Heywood, Manchester.

Fry's Pure Cocoa

To secure this article ask for FRY'S PURE CONCENTRATED

The Only Gold Medal

For INFANTS' FOOD awarded at the

PARIS EXHIBITION, 1889,

HAS BEEN CONFERRED UPON

NESTLE'S FOOD

To H.R.H. The Prince of Wales, The Empress of Germany, &c.

BRAND & CO.'S
PEPTONES
OF
BEEF,
MUTTON,
VEAL,
AND
CHICKEN.

BRAND & CO'S. SPECIALTIES FOR INVALIDS.
CONCENTRATED BEEF TEA, VEAL, MUTTON & CHICKEN BROTHS; TURTLE SOUP & JELLY, CALFS' FOOT JELLY, MEAT LOZENGES
ESSENCES OF BEEF, MUTTON, VEAL AND CHICKEN
SOLE ADDRESS, 11 LITTLE STANHOPE STREET, MAYFAIR, W.

EIGHT PRIZE MEDALS AWARDED

GOODALL'S HOUSEHOLD SPECIALITIES.

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each.

GOODALL'S BAKING POWDER.

The Best in the World. 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

GOODALL'S EGG POWDER.

One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s. 2s. and 5s. Tins.

GOODALL'S CUSTARD POWDER.

Delicious Custards without Eggs. In Boxes, 2d., 6d., and 1s. each.

GOODALL'S BLANCMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s. and 2s. each.

GOODALL'S GINGER-BEER POWDER.

Makes the Best Ginger-Beer. Packets, 3d. nd 6d.

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For Painting Stoves, Grates, Iron, Tin, &c. 6d. and 1s. Bottles.

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

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For Polishing and Cleaning all Metals. Boxes, 6d., 1s. and 2s

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In ½-pint, 1-pint, and Quart boxes, 3d., 6d., and 1s. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS

PATENT MEDICINES AND DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS.

24

AGRICULTURAL CHEMISTS SHOULD STOCK

MADE ON THE DANISH SYSTEM. A PURE VEGETABLE PREPARATION.
DOES NOT DISCOLOUR THE BUTTERMILK.

Attractive Bills.

Bottles, 6d., 1s., and 2s. 6d.

STOCKED BY WHOLESALE HOUSES.

ALSO

TOMLINSON & CO.'S BUTTER POWDER.

IN USE 35 YEARS.

To be used at time of Churning. Corrects all Bad Taste. Keeps Butter Sweet and Firm.

Boxes, 3d., 6d., 1s., 2s. 6d., and 7s.

OF ALL WHOLESALE HOUSES.

ATTRACTIVE SHOW BILL, &c.

Manufactory - - LINCOLN.

REGISTERED.

TOWER TEA

OBTAINED THE

HIGHEST AWARD

FOR TEA AT THE

PARIS EXHIBITION.

PRIZE MEDAL, PARIS, 1889.

To avoid imposition see that the trade marks (a Tower, with the word "Strength" across it, and "Tower Tea") are on every package, without which none is genuine.

WHERE VACANCIES EXIST AGENTS ARE APPOINTED BY

PRIZE MEDAL, PARIS, 1889.

THE GREAT TOWER STREET TEA CO., LIMITED

5 JEWRY STREET, LONDON, E.C.

SANTHA.

A Digestive EXTRACT OF TEA, made instantly in Cup or Teapot.

The injurious action of tea upon the digestion is due to the tannin it contains; and as this dissolves instantly in hot water, no method of infusion can keep it out. Santha is the only form of tea that has no action upon either food or membranes; and it is not bilious like cocoa and coffee.
The *Lancet* of May 4th, 1889 says:—"The aroma and the caffeine are preserved, and the tannin is neutralised and rendered innocuous."
The *London Medical Recorder* of Feb. 20th, 1889, says:—"Santha possesses the aromatic and stimulating qualities of the crude leaf, minus its astringency.
The *Illustrated Medical News* of August 31, 1889, says:—"We can recommend it as the most digestible and palatable form of tea yet submitted to us."
Santha is the only Tea suitable for Weak Digestions. Of Chemists, &c., 1s., 2s. 6d., and 6s.; or by post from works, 2d. extra.
SANTHA TEA COMPANY (LIMITED), Penarth Street, Hatcham, S.E. Wholesale Agents—BARCLAY & SONS, Farringdon Street, E.C.

MILLAR'S BRITISH WINES.

ORANGE (suitable for Quinine), GINGER, RAISIN, COWSLIP, CHERRY, &c.

A. MILLAR & CO., Thomas Street, DUBLIN.

Sole Agents for London and District—H. J. ROYDANT & CO., 75 Acre Lane, Brixton, S.W.

TRADE MARK.

KANGRA VALLEY

INDIAN TEA GROWERS' ASSOCIATION.

French & Langdale, 14 St. Dunstan's Hill, London, E.C.

Guaranteed to be Absolutely Pure, as supplied to Europeans in India

Packed in 1-lb., ½-lb., and ¼-lb. Metallic Air-tight Packets.

No. 1, Orange Pekoe, at 4/ per lb. No. 2, Pekoe, at 3/ per lb. No. 3, Pekoe Souchong, at 2/6 per lb. No. 4, Souchong, at 2/ per lb.

Export Prices in Bond, 6d. per lb. less than above, in Chests of 50 lbs. and upwards, shipped free of charge. 50 lbs. Carriage Paid. No Travellers employed. Wholesale Terms and Tasting Samples on application.

These Teas are recommended to Chemists not only on account of their Purity, but because they are Less Astringent than other Indian Teas.

"LA JOYA" This First-Class Brand of English-Made Cigars

IS MANUFACTURED SOLELY BY

M. & R. PEACOCK,

TOBACCO, CIGAR, SNUFF, AND CIGARETTE MANUFACTURERS

Who will be pleased to send a sample FREE to any address in the United Kingdom on application.

A box of 25 (as in margin) for 5/, or a box of 50 for 9/, on recei of Postal Order or Stamps, carriage paid.

The only Manufacturers of the CELEBRATED "ROYAL CHARTER" TOBACCO.

WHOLESALE PRICE LISTS TO RETAILERS ON APPLICATION.

542 KINGSLAND ROAD, LONDON, N.E. ESTABLISHED 1858.

CIGARS, ETC

At the Lowest Wholesale Prices.

La Juana .. .. .. 10/6 per 100, Sold at 2d. each
La Trafalgar .. .. .. 15/0 „ „ 3d. „
El Sol Habaners, Havannah 1885 Crop } 22/ per 100, Sold at 4d. each.
&c., &c. TOBACCO, CIGARETTES, &c.

Samples on receipt of 1s. 6d. in Stamps.

BEWLAY & CO., LTD.

Tobacco Manufacturers and Cigar Importers,

49 STRAND, and at 143 CHEAPSIDE, **LONDON.**

ESTABLISHED OVER 100 YEARS.

RANDALL'S BLACK CURRANT LOZENGES

Plain Black Currant, old square 2/6
Plain Black Currant, rough oval 2/6
Black Currant and Ipecacuanha 2/6
Black Currant and Tannin .. 3/
Black Currant Voice (warm astringent) 3/
Black Currant Cough Lozenges* 3/6
*Ipecac. & Morph., strength as "B.P."

In Bottles, 1-lb., 2-lb., 4-lb., and 7-lb. For Exportation, in Soldered Tins, of any size. From EDWARDS, London, or SANGER & SONS; through any Wholesale House; and from the Manufacturers,

RANDALL & SON, SOUTHAMPTON,

Who will forward Samples by post on application.

Also Brown Cough Lozenges, 2/; 7 lbs. stamped with name free, and Musk Lozenges (Special), 2/6.

N.B.—Medical Lozenges of every kind, including those of the Pharmacopœia of the Hospital for Diseases of the Throat, London, *made with Black or Red Currant.*

DRIED BITTER ORANGE PEEL

This Peel is specially cut as *free from pith* as possible, and by care in drying its Colour and Aroma are well preserved. It is thus in a condition most favourable for the manufacture of the Official preparations.

Sample will be sent free on application.

"EXCELSIOR" TABLE JELLIES

IN CARDBOARD BOXES,

Of ½-Pint, Pint, and Quart Size, packed in Wood Boxes free.
½-Pints, 1/8 per doz.: Pints, 3/ per doz.: Quarts, 5/9 per doz.

EXCELSIOR TABLE JELLIES.

EXCELSIOR TABLE JELLIES.

FLAVOURS:
Orange, Lemon, Calves' Feet, Vanilla, Raspberry, Noyeau, Cherry, Strawberry, Pineapple, and Black Currant.

CHAS. SOUTHWELL & CO.

DOCKHEAD, LONDON, S.E.

"MYRTLE GROVE" TOBACCO

In 1-oz., 2-oz., and 4-oz. Packets, and ¼, ½, 1 lb. Tins only.

TADDY & CO., 45 Minories, LONDON

ESTABLISHED 150 YEARS,

SNUFF, TOBACCO, AND SEGAR MANUFACTURERS.

Write for List of Specialities.

COMPARE, AND THEN DECIDE.

5/6 per Gross.

BOTTLE SHAPE.

PENNY MENTHOL CONES.

BOTTLE SHAPE.

5/6 per Gross.

On ¼-Gross Show Cards, with Elastic. Sample Free.

PETER TYRER, 70 LONG LANE, BOROUGH, LONDON, S.E.

EXTRACT OF MEAT

W. E. AYLWIN, 27 LEADENHALL ST., LONDON,

BROKER TO ALL THE LEADING IMPORTERS & PACKERS.

SAMPLES AND QUOTATIONS ON APPLICATION TO THE ABOVE.

TRADE MARK.

DENAEYER'S

LIQUID PEPTONES STERILIZED

Free from microbes!
Keep good for ever in all Climates.
118 BISHOPSGATE STREET WITHIN, LONDON, E.C.

DENAEYER'S PEPTONATE OF IRON. A bland, non-irritating and most easily assimilable ferruginous preparation. For debilitated constitutions, children, and aged people.

DENAEYER'S PEPTONE OF MEAT. A powerful restorative for all ailments of the stomach, stimulates general nutrition. Is retained when the stomach rejects all other food. Pleasant to taste.

Of all Chemists and Wholesale Houses.

"RAMORNIE." LIEBIG'S Extract of Meat.

As supplied to the Admiralty, War, and India Offices.

1-lb. Jars	per lb. 6/9	per doz. 81/0		2-oz. Jars	per lb. 7/8	per doz. 11/6	
½-lb. Jars	" 7/0	" 42/0		1-oz. Jars	" 8/4	" 6/3	
¼-lb. Jars	" 7/3	" 21/9		½-oz. Jars	" 8/8	" 3/3	

QUOTATIONS FOR EXTRACT IN "BULK" ON APPLICATION.

Write for Detailed Price List to the Australian Meat Co., 9 and 11 Fenchurch Avenue, E.C. 6 lbs. *Carriage Free.*

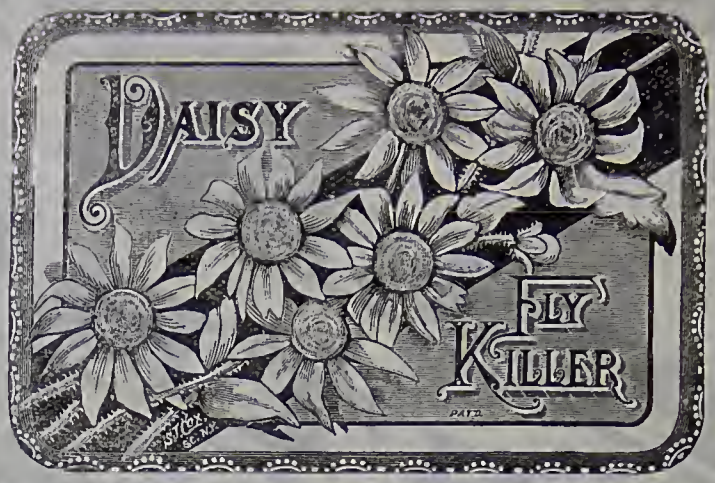
NEWTH'S BRITISH FURNITURE POLISH.

First Class Award, Adelaide.
First Class Award, Melbourne.
Gold Medal, Paris Exhibition.
Gold Medal Awarded,
New Zealand Exhibition.
Silver Medal and First Class
Certificate, Calcutta Exhibition.

1/9, 3/3, and 6/6 per doz.

Superior to all other preparations for the purpose.

THE "DAISY FLY KILLER."



Will Kill all the Flies you have. It has won Thousands of Testimonials. Sample of them:—

JOY & GARDNER, Hardware, Minneapolis, Minn., say:—"It is the neatest, cleanest, and most effectual fly exterminator we have ever seen."

Rev. Dr. TALMAGE says:—"I can preach with comfort on a summer day if the 'Daisy Fly Trap' is in my church."

Retailed at 1/- each in all parts of the world. Price, 8/- per dozen.

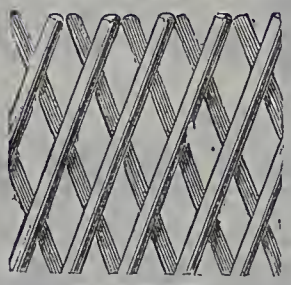
CHEAVIN'S FILTERS.

Patent Removable Plate.

Highest Awards wherever exhibited.

All Sizes in Stock at Cheavin's lowest prices.

TRELLIS.



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12 feet by 1 foot	.. .. ..	1/6 per piece.
12 „ by 2 „	.. .. ..	2/6 „
12 „ by 3 „	.. .. ..	3/11 „

Stronger and easier to paint than the flat, not necessary to have a capping.

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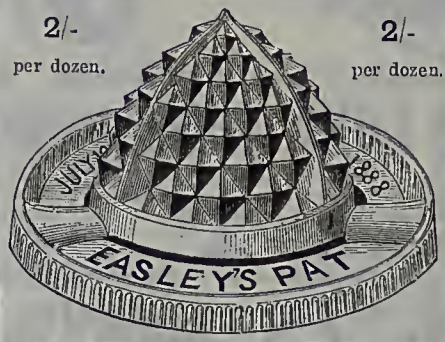
THE "LAST DROP."

2/- per dozen. 2/- per dozen.



☞ Every Genuine Easley's Patent Lemon Juice Extractor bears name and date July 10th. There are many imitations.

No other will compare with this.

250,000 in Stock. Show Card with first order.

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Catches Thousands where other Traps fail.
Per 9/- doz.

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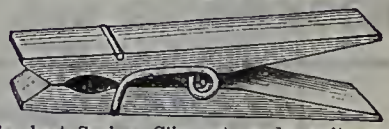

The best Spring Clip yet made, quite new, 3½ inches long, and packed in Show Boxes of 1 and 2 gross.
Price, 3/6 per gross.

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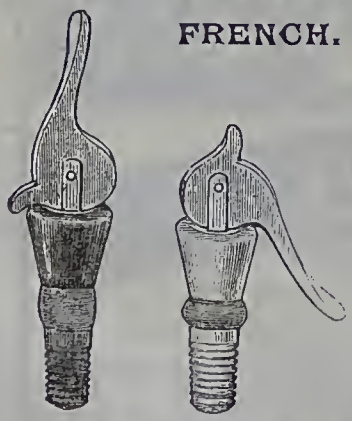

With this New Patent Stopper you can close hermetically a small or large bottle.
In polished Ebony or Boxwood.
Per dozen, 3/6.

AERATED WATER BOTTLE OPENER.

The best by far that has been produced.

(Patented.)

In Three Qualities.

Japanned, 4/- per doz.; Bronzed, 8/- per doz.; Nickelled, 12/- per doz. net.

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Fletcher, Fletcher and Co.
Symes and Co.
Typke and King

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Dinneford
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Kerfoot, T. (Citrate)
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Hearon, Squire and Francis
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Hicklsson, J.

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Day, Son and Hewitt (Veterinary)
Day and Sons (Veterinary)

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Cocking and Co.
Hookin, Wilson and Co.
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Howards and Sons
May and Baker

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Harvey, J. & W., and Co.
Jones and Co.
Macnair, J. and D., and Co.
Phillips, G., and Co.

METHYLENE
Robbins, J., and Co.

MICROSCOPES
Darton, F., and Co.
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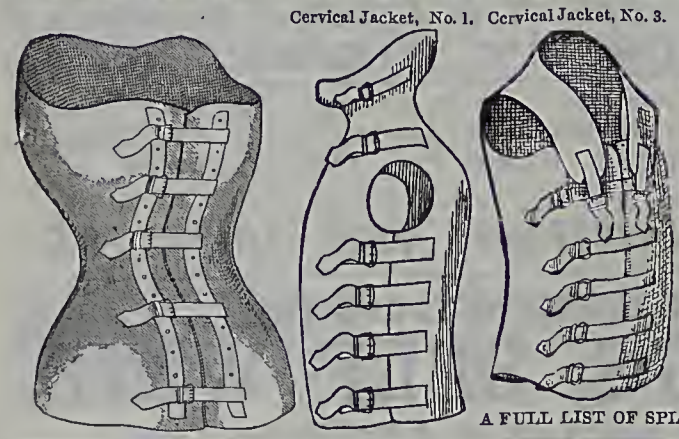

INSTRUCTIONS FOR MEASUREMENT.

JACKET
(in cases of slight deformity)

Circumference at axilla.
" waist.
" hips.
Length from axilla to great trochanter.

In severe angular cases circumference over apex of curve, position of ditto, and contour should be given; in lateral cases a description of the case.

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Same measurements required, and circumference at neck, and length from neck to axilla.

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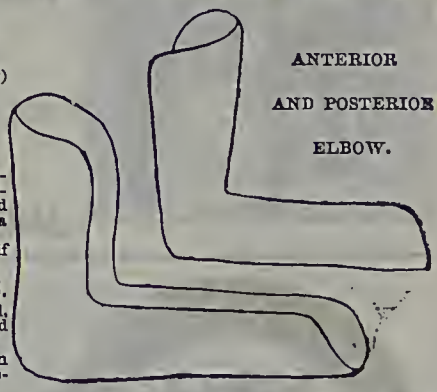

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Aloin ..... $\frac{1}{10}$ gr.	5/	16/
" ..... $\frac{1}{4}$ gr.	6/	20/
" ..... $\frac{1}{2}$ gr.	7/	24/
" ..... 1 gr.	11/	40/
" Compound	7/	24/
" and Strychnine	7/	24/
" Strychnine and Belladonna	7/	24/
" or Aperient, No. 1 (Clark)	9/	32/
" " No. 2, No. 3, No. 4	7/	24/
Morphine Muriate ..... $\frac{1}{2}$ gr.	7/	24/
" " ..... $\frac{1}{4}$ gr.	9/	32/
Narcotic Extracts (Brown-Sequard)	15/	56/

Being completely sealed, all substances are perfectly preserved from oxidation.	DOZ. BOTTLES containing 25 PILLS.	DOZ. BOTTLES containing 100 PILLS.
Quinine, Bisulphate ..... $\frac{1}{4}$, $\frac{1}{2}$ gr.	5/	16/
" " ..... 1 gr.	5/	16/
" " ....2 gr.	5/6	18/
" " ....3 gr.	7/6	26/
" " ....4 gr.	9/6	34/
" " ....5 gr.	11/6	42/
" Sulphate .... ..$\frac{1}{4}$, $\frac{1}{2}$ gr.	5/	16/
" " ....1 gr.	5/	16/
" " ....2 gr.	6/	20/
" " ....3 gr.	8/	28/
" " ..... 4 gr.	10/	36/
" " ..... 5 gr.	12/	44/

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Are the PUREST, SAFEST, and BEST that can be used, containing nothing of a deleterious nature. They are strongly recommended by Drs. E. Smith, M.R.C.S., Prof. W. Wilson, M.D., Gordon Stables, M.D., R.N., Geo. H. Jones, D.D.S., F.R.S.L., F.R.M.S., &c., Andrew Wilson, M.D., F.R.S.E., &c., &c., J. Hounsell, F.R.C.S., and many others.

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PURILINE TOOTH WASH for the TEETH, GUMS, and BREATH. A pure, perfect, and refreshing Fluid Dentifrice. A few drops in water used daily will thoroughly Cleanse, Beautify, and Preserve the Teeth, polish the Enamel, prevent Tartar, destroy all living "Animalculæ." It is Absolutely Pure and Harmless to the youngest child or most delicate constitution. Used as a Tooth Wash after each meal will keep the mouth in a delicious condition of comfort, health, purity, and sweetness, for ever. 1*s.* and 2*s.* 6*d.*

BUNTER'S DENTINE, a Permanent Stopping for Decayed Teeth. One can easily prepare and place it in the cavity of the Tooth in a soft state, and in a short time it becomes a perfectly hard and white Enamel, forming, as it were, a part of the original substance of the Tooth. Price 1*s.* 6*d.*

PURILINE TOOTH POLISH, a pure and perfect article for Cleansing the Teeth Hardening the Gums, and Perfuming the Breath Will Purify and Beautify the Teeth with a Pearly Whiteness, polish the Enamel, prevent Tartar, and destroy all living Germs (Animal or Vegetable), which are the most powerful source of decay to all Teeth. It is not a Powder or Soft Paste that will scatter over clothing and soil the toilet: it is a Dental Paste of stiff consistency, non-gritty, and Absolutely Pure and Harmless to use. It is neatly put up, forming a sightly Toilet Article, or may be carried in the pocket in any climate of the world, without injury or losing its virtues. Price 1*s.*

Proprietor—A. WILSON, 422 CLAPHAM ROAD, LONDON, S.W.

AUTUMN MANŒUVRES.—THE ROYAL HORSE ARTILLERY.

The above Picture, size 17½ by 22 inches, from the original Pen and Ink Drawing, beautifully printed on heavy rolled Paper, suitable for framing, sent Post Free to any part of the world, on receipt of 3d. in stamps, by the Proprietors, THE CHARLES A. VOGELER COMPANY, 45 Farringdon Road, London, E.C.

Digestion.

LONDON.] APRIL 26. [1890.

Notes on Digestive Enzymes.

ZYMINE (FAIRCHILD).

Zymine is rightly considered as one of the greatest advances in modern medicine. It affords a natural and most efficacious means for the treatment of dyspepsia. It is our only therapeutic resource in many forms of intestinal indigestion and in occlusion of the pancreatic duct, &c. It is our only means of pre-digesting all kinds of foods, administering them fresh and palatable, and in such form that they will not prove a burden upon digestion. It is the only agent which does for the digestive organs what they are unable to do for themselves. It has revolutionised infant dietetics, inasmuch as its addition to cows' milk renders that fluid as easily digested as mothers' milk in every particular, after the lapse of half an hour.

Zymine contains no diluent, such as starch or milk sugar, which additions do not in the least assist its digestive action and are added simply to increase the *bulk and profit.* Zymine must not be confounded with commercial Pancreatin—the latter is more expensive and less active.

ZYMINE PEPTONISING POWDERS.

These are so called because they produce *peptones.* Whenever it is proposed to peptonise milk only, and that continuously, the Zymine Peptonising Powders (Fairchild)* will be found the most convenient form to use for obvious reasons. They insure accuracy, security from deterioration, and extreme convenience. For patients away from home, travelling, or visiting, these advantages will be specially appreciated. In those cases, however, where strict economy is a matter of considerable moment, the plain Zymine can be used.

The Zymine Peptonising Powders are admirably adapted for uso with the patent Thermo Safeguard Feeding Bottle.

Zymine (Fairchild) is supplied in three forms :—

1. In Powder, put up in ¼-oz. and 1-oz. bottles.

2. (*a*) In 3-grain Tabloids, put up in bottles of 25 and 100.

(*b*) In Compound Tabloids (of 25 or 100 in a bottle), each containing Zymine, 2 grains; Bismuth Subnitrate, 3 grains; Powdered Ipecac., 1/10 grain.

Dose.—One or two, an hour or so after eating.

3. In Zymine Peptonising Powders in glass tubes, a dozen in a box, each tube containing 5 grains of Zymine and 15 grains of Soda Bicarb.

Zymine (Ext. Pancreatis) Fairchild, supplied to the Trade in ¼-oz. and 1-oz. bottles, at 20*s.* and 60*s.* per doz.

Zymine and Zymine Comp. Tabloids supplied to the Trade in bottles of 25 and 100, at 18*s.* and 48*s.* per doz. Retail 2*s.* and 5*s.* each.

Zymine Peptonising Powders (Fairchild) supplied to the Trade in boxes containing 1 doz. tubes, at 18*s.* per doz. boxes. Retail, 2*s.* per box.

PEPSIN (FAIRCHILD)

In Scales or Powder.

Possesses the highest standard of activity and permanency.

Numbers of physicians have been disappointed in the action of some commercial pepsins. Dr. Corvisart, of Paris, first suggested the employment of the gastric digestive enzyme in enfeebled digestion, and doubtless, as originally prepared, pepsin was found to be of much benefit as an aid to digestion. The immense demand subsequently for pepsin led to the adoption of varying processes for the preparation of the drug. Numbers of these were found faulty; some were evaporated down at high temperature and thus destroyed; others who succeeded in obtaining a comparatively active pepsin were tempted to employ various *diluents*, notably, amongst others, starch and milk sugar. The Pepsin prepared by the Fairchild process possesses ten times the proteolytic power of commercial pepsins when subjected to the Pharmacopœia test, *i.e.*, one grain will digest 1,000 grains of coagulated albumen instead of 100 grains only. Those physicians who desire to prescribe an active preparation should be careful to specify *Fairchild.*

Dr. Burney Yeo says, "Pepsin is largely given to promote the activity of the stomach itself. For this purpose many preparations exist, *but some are very uncertain and many probably quite inert.*"

Pepsin, either in scales or powder, may be given spread on bread and butter or in the convenient form of sugar-coated Tabloids; each Tabloid contains one grain of pepsin with the appropriate quantity of acid and aromatics.

"Pepsin (Fairchild) excels all other preparations with which we are acquainted."—*Edinburgh Medical Journal.*

Supplied to the Trade in bottles containing 25 and 100 Tabloids at 14*s.* and 42*s.* per dozen.

Pepsin in Scales or Powder supplied to the Trade in ¼-oz. and 1-oz. bottles at 20*s.* and 60*s.* per dozen.

* Beware of imitations of these Peptonising Powders—always see that the name FAIRCHILD is on the package. Substances of an entirely different character are being sold in the market under the name of Peptonising Powders.

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, London, E.C.

Above Prices subject to usual Discount.

"VASELINE," in 1d., 2d., & 3d. TINS.

All nicely wrapped, and stamped with the name of

THE CHESEBROUGH MANUFACTURING CO., the Proprietors and Sole Manufacturers.

NONE OTHER GENUINE.

1d. Tins, One Gross in Wood Box at	8/-,	Five Gross assorted,	7/2	per Gross net.		*Of all Wholesale Houses, or Sample Boxes Carriage paid on receipt of Postal Order.*
2d. Tins, One	,,	,,	16/-	,,	14/-	,,
3d. Tins, Half	,,	,,	24/-	,,	21/-	,,

CAUTION.—The fancy word "**VASELINE**" is the Registered Mark, and is the exclusive property of this Company, and indicates *THEIR* make and putting up of *THEIR* preparations of Petroleum Jelly.

SHOW CARDS AND CIRCULARS ON APPLICATION.

42 Holborn Viaduct, London, E.C.

B. W. & CO.] # Saccharin Tabloids. [B. W. & CO.

REDUCED PRICES.

B. W. & CO. Pure Saccharin Tabloids—

		Retail each.	Per doz.
,,	In Beautiful Crystal Glass Oval Bottles, with White Metal Caps, 100 in each...	/9	7/6
,,	Ditto, ditto, 200 in each	1/6	14/

BEWARE OF SPURIOUS IMITATIONS.

ABOVE PRICES SUBJECT TO USUAL DISCOUNT.

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.

DRAPER'S INK (DICHROIC)

THE NEW BLACK INK, different from anything else ever produced.

Writing becomes a pleasure when this Ink is used. It has been adopted by the principal Banks, Public Offices, and Railway Companies throughout Ireland.

It writes almost instantly full black.
Does not corrode Steel Pens.
Dries rapidly on the Paper.
Is cleanly to use, and not liable to blot.
Flows easily from the Pen.
Blotting-paper may be applied at the moment of writing.

In Jars, 6d., 1s., and 2s. each.

Can be obtained, in London, through **Messrs. Barclay & Sons**, Farringdon Street; **W. Edwards & Son**, 157 Queen Victoria Street, E.C.; **F. Newbery & Son**, Newgate Street; **S. Maw, Son & Thompson**, Aldersgate Street; **Hayden & Co.**, 10 Warwick Square, Paternoster Row; **Hovenden & Sons**, City Road; **Ayrton & Saunders**, Duke Street, Liverpool; **Goodall, Backhouse & Co.**, Leeds; **Jno. Heywood**, John Dalton Street, Manchester; **James Hemington**, 6 Moor Street, Birmingham; **Henry Hodder**, Broad Street, Bristol

BEWLEY & DRAPER (Limited), DUBLIN.

See "CHEMIST AND DRUGGIST," December 15th, 1874.

BENGER'S PREPARATIONS

GOLD MEDAL AWARDED, HEALTH EXHIBITION, LONDON.

"Mr. Benger's admirable Preparations."—LANCET.

LIQUOR PANCREATICUS (BENGER).
For preparing peptonised or partially digested milk, soups, &c. Bottles, 2/6, 4/6, and 8/6, with full directions.

BENGER'S PEPTONISING POWDERS.
Colourless, odourless, and soluble. One will peptonise a pint of milk, &c., in 10 to 15 minutes. Boxes of 12 powders, 2/6.

LIQUOR PEPTICUS (BENGER).
An exceedingly active fluid pepsin. Dose, one to two teaspoonfuls with meals. Bottles, 3/, 5/6, and 10/6.

BENGER'S PEPTONISED BEEF JELLY.
A delicious quick restorative; will keep in any climate. Tins, 2/ each.

BENGER'S PEPTONISED CHICKEN JELLY.
A nutritive delicacy for Invalids. Tins, 2/ each.

BENGER'S FOOD (Pancreatised).
For Infants, Children, and Invalids. This delicious and highly nutritive food is distinguished from others by the ease with which it can be digested and absorbed. Tins, 1/6, 2/6, 5/, and 10/.

BENGER'S NEW ESSENCE OF RENNET.
For making pure whey, junkets, &c. Bottles, 1/ each.

BENGER'S PREPARATIONS are obtainable through all leading Wholesale Houses or of the Manufacturers,

MOTTERSHEAD & CO. (S. PAINE & F. B. BENGER), PHARMACEUTICAL CHEMISTS, MANCHESTER

THE CHEMIST AND DRUGGIST

ESTABLISHED 1859.

PRINCIPAL OFFICE, 42 CANNON STREET, LONDON, E.C.

BRANCH OFFICES:

MELBOURNE, SYDNEY, AND NEW YORK.

Published every Saturday.

Subscription 10s. per year, payable in advance; dating from the commencement of any month.

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Post free to every country in the world. Single copies 4*d.* each.

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POSTCARD COMPETITION.

APRIL. — FINAL ANNOUNCEMENT.

THE competition for this month is to forecast the result of the election of the Pharmaceutical Council in May next. The names of the candidates are printed below, and correspondents are to send us these names on postcards in their anticipated order on the poll. We shall ascertain whose forecast is the best, when the official poll is declared, in the following manner:—We shall award 10 marks each for a correct anticipation of the top and of the bottom man; for every other place correctly filled we shall award 5 marks each.

Subscribers and their employés alone are eligible to compete; prophecies must be sent on postcards, and none will be admitted which reach us after April 30.

The candidates are:—

Abraham, Alfred C., Liverpool
Atkins, Samuel R., Salisbury
*Broad, John M., London
Carteighe, Michael, London
*Coleman, Alfred, Cardiff
Evans, Gwilym, Llanelly
Gostling, Thos. P., Diss
Greenish, Thos., London
*Grose, Nicholas M., Swansea
Hampson, Robert, London
Harrison, John, Sunderland
Hills, Walter, London
*Hopkin, William K., London
*Lake, John Hinton, Exeter
Leigh, Marshall, Brighton
*Maltby, Joseph, Lincoln
Martin, Nicholas H., Newcastle-on-Tyne
Richardson, John G. F., Leicester
*Ross, Lewis B., South Driffield
Schacht, G. F., Clifton, Bristol
*Spink, H. N. B., Westminster
*Storrar, David, Kirkcaldy, N.B.
*Wells, F. T. Percy, London

The names against which an asterisk is placed are not now members of the Council.

ADVERTISEMENTS of situations vacant and wanted, businesses for disposal, &c., will be received by us up till the first post on Friday morning.

Medical Gleanings.

JAUNDICE.

ACCORDING to Witkowski, subcutaneous injections of $\frac{1}{6}$ grain of pilocarpine act as a specific in jaundice. The injections are given two or three times a day, but they are of no avail when the disease arises from tumour of the liver.

CARBOLIC OIL FOR SCABIES.

DR. FRED TRESILIAN speaks in favourable terms of the beneficial effects by the use of carbolised oil (1 in 15) in the treatment of scabies accompanied by intenser irritation. In one case an extensive eruption disappeared in three days (after ung. sulph. co. had failed); and in all cases the local anæsthetic properties of the carbolic acid were clearly manifest.

GLYCERINUM SAPONATUM.

THIS new ointment basis is described by Dr. Hebra as an alkaline fat obtained in the manufacture of soap, dried, and dissolved in glycerine. The solution when heated, filtered, and allowed to cool, forms a yellow, transparent, and somewhat elastic mass, perfectly odourless, melting at body heat, and easily soluble in water. Dr. Hebra is so confident of the efficacy of this vehicle that he asserts its potency with salicylic acid and creosote to cure that intractable disorder, lupus. His prescription is glycerinum saponatum, 90; salicylic acid, 5; creosote, 5.

PENNYROYAL.

DR. LEITH NAPIER, of Grosvenor Square, W., agrees with Dr. Marshall's suggestion that greater precautions should be enforced regarding the sale of pennyroyal. He states (*British Medical Journal*) that the drug is used very freely by many married women to hurry on delayed periods, and on inquiry finds that among many classes it is recognised as a tolerably certain abortifacient, and esteemed as less hurtful than aloes, savine, cantharides, ergot, elaterium, croton oil, black hellebore, squills, or even borax. At the same time, he adds, it is very questionable if any if these drugs can be regarded as absolutely certain to interrupt gestation

PULQUE IN HYDROPHOBIA.

IN a Peruvian journal, *La Crónica Médica*, Dr. Pablo Patron relates a case of a boy who had been bitten by a rabid dog. Although the wounds were antiseptically treated, the boy began to show signs of hydrophobia. One day he escaped into the fields, where he gathered leaves of the American aloe (*Agave americana*), and sucked them. Subsequently the boy recovered from the disease, and the agave gets credit for the cure. *Agave americana* not being readily obtainable in this country, anyone under the painful necessity of requiring treatment of this kind might try pulque, which is the juice of the *Agave americana* slightly fermented. Pulque is readily obtainable.

ARISTOL FORMULÆ.

ARISTOL (di-thymol iodide) is now coming into use in Germany as an iodoform substitute, and the following are some of the forms in which it is employed:—

		Parts
(1)	Aristol	1
	Flexible collodion	9

Dissolve.

To be used for painting on the skin. Should be dispensed in a dark-coloured bottle.

		Parts
(2)	Aristol	10
	Olive oil	20
	Lanoline, to	100

Dissolve the aristol in the olive oil and mix with the lanoline.

Bougies are made with cocoa butter, each containing from 2 to 8 grains of aristol. Pessaries contain from 6 to 15 grains, and are made with the same basis. We gave an account of aristol in our issue of February 1, page 161.

Metropolitan Reports.

Westminster College Pharmacy Club.—On Thursday evening, April 17, a Cindorella dance, in connection with the above club, was held at Anderton's Hotel, Fleet Street. The hall-room was well filled, and a most enjoyable evening was spent by the members and guests. Messrs. W. C. Sayers and J. E. Southon officiated as M.C.'s. The music was supplied by Messrs. Dray's quadrille band. The *Daily Graphic* had an artist at the hall, and a sketch from his pen appeared in Saturday's issue of his paper.

Fire at an Oil Refinery.—A very serious fire occurred early on Thursday morning at Sir W. A. Rose & Co.'s oil refinery, Bankside, Southwark. Enormous quantities of oil were consumed in the conflagration, while the heat caused hundreds of barrels to burst, the contents rushing down towards the river in torrents. The works are totally destroyed, two firemen were rather seriously injured, and many poor people residing in the neighbourhood have suffered serious losses. The cause of the fire has not been ascertained.

Society of Chemical Industry.—A meeting of the London section was held on Monday night at Burlington House—Mr. David Howard in the chair. The principal paper was one by Mr. Boverton Redwood on the petroleum-fields of India. Petroleum occurs in Upper and Lower Burmah, in Assam, in the Punjab, and in the Kashmir districts. Mr. Mallett, of the Geological Survey of India, has shown that the collection of petroleum in India is of very ancient date, and there is no doubt that there are very large supplies of petroleum in those regions. Although some of the attempts to carry out drilling on a somewhat extensive scale were attended, in the first instance, with very promising results, up to the present time the production of petroleum in India has not been very important. This is probably due to the manner in which the work has been carried out, for there is clear evidence that the product is of high quality for illuminating purposes, while that from the Khatan oil-fields is likely to be of very great value as a liquid fuel for locomotives. The question of transport is occasioning much anxiety to commercial people, in consequence of the scarcity of coal or wood as fuel, but if petroleum were used, this anxiety would be dissipated. Mr. Redwood has no doubt, that in the near future, as the development of the drilling operations are further extended, and the results are obtained which may reasonably be expected, commercial enterprise will make great advances in the country, and the value of petroleum be much increased.

Oath against Oath.—In the City of London Court on Tuesday, before Mr. Commissioner Kerr, Messrs. E. Jacobs and Son, trading as the Veterinary Medicine Manufacturing Company, of 103, Houndsditch, E.C., sought to recover the sum of 2*l.* 4*s.* for chemicals supplied to Mr. H. Clarkson, of Newport Street, Lambeth Walk, which he kept for upwards of a year. Mr. E. B. Tattershall appeared for the plaintiffs. Mr. Barber, who was in the employment of the plaintiffs in April last, said he took the order in question from the defendant for the chemicals which were subsequently sent him. The manager of the defendant's shop said his employer did not want the goods, and Mr. Barber worried him to give an order, which he refused to do. Mr. Barber said he would send them two bottles of the goods as samples, but still the defendant said he did not want the goods and would not have them. In spite of that, a fortnight afterwards, two boxes of the goods came by Carter, Paterson & Co., and a month later Barber again called for the money. The defendant told him he would not pay for them. Mr. Barber said that was all very well, but he was on his oath. Mr. Commissioner Kerr: And he is on his oath, too. Why is not Clarkson here? The defendant's manager explained he had met with an accident. Mr. Tattershall asked the learned Judge if he would allow him to call the plaintiff, who would prove an admission of the debt. Mr. Commissioner Kerr: No; you know what I think of these admissions. The case was then adjourned until May 19, for the defendant to attend.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BRIGHTON.

The Sussex Drug Company have just opened new premises in Church Road, West Brighton. The thoroughfare is now well represented by the trade—perhaps some may think too well. The company have establishments in Queen's Road, Brighton, and also at Hastings.

Mr. Marshall Leigh, the member of the Pharmaceutical Council, who is at the head of four establishments in Brighton and Hove, is now seeking municipal honours. The contest will be practically fought on the electric lighting question. Mr. Leigh is in favour of the new system, whilst he is opposed by a gentleman who declares he has no sympathy with the electric light.

HULL.

Smashing a Chemist's Window.—At the Hull Police Court, on April 22, James Fisher was charged with doing wilful damage to the shop-window of Councillor Loten, druggist, Myton Gate. The prisoner had been a tenant of Mr. Loten's and he wanted him to leave. Prisoner had promised to go, but had not done so. On Monday evening Mr. Loten went to the house, and, finding it unoccupied, locked it up and took the key away. Subsequently, about six o'clock, prisoner came to his shop and asked why he had locked up the house. He afterwards went outside and wilfully smashed the window, doing damage to the amount of 1*l.* Prisoner denied that he did it wilfully. He was ordered to pay 1*s.* and costs, as well as 20*s.*, the amount of damage done.

LIVERPOOL.

A New Pharmacy.—Mr. Councillor Woodcock, whose principal places of business are at Birkenhead, has recently enlarged and partially rebuilt his Hoylake branch in Market Street, which now presents a very handsome appearance. A fine verandah, covered with frosted plate-glass, has been erected outside, over the footwalk. The shop inside is roomy, light, and elegantly fitted up. Among the fittings a handsome marble clock, marble ornaments, and other articles of vertu, relieve the eye. The inside frames of the windows are adorned with various designs of medicinal plants and flowers in coloured glass, and the windows are provided with dainty art blinds. The bottles and jars which contain drugs of a poisonous nature are of ribbed glass and stone. Mr. Woodcock has evidently confidence in the future of Hoylake.

A Conversazione of the Pharmaceutical Students' Society was held on Friday evening, April 18, at the Temperance Hall, Hardman Street, and proved a decided success, Mr. W. P. Evans, of Hanover Street, was to have presided, but, being unavoidably absent, Mr. Conroy acted on his behalf, and opened the proceedings by a short but appropriate speech, alluding to the objects of, and wishing success to, the society. After some well-timed remarks from the President (Mr. Wyatt) and Mr. Johnson (secretary), a well-selected musical programme was satisfactorily gone through by amateur performers. The exhibits, which attracted considerable attention, were drugs and preparations illustrative of the British Pharmacopœia, by Messrs. Evans, Sons & Co.; drugs and preparations, by Messrs. John Moss & Co.; infants' food, bougies, throat-sprays, enemas, &c., by Messrs. Sumner & Co.; tabloids in great variety, hypodermic syringes, inhalers, pinol, &c., by Messrs. Burroughs, Wellcome & Co.; a handsome case of platinum crucibles, dishes, and chemicals, by J. H. & S. Johnson; a fine stand of lime-juice cordials and tablets, by Messrs. Evans, Sons & Co.; and an interesting exhibit of chemical and philosophical apparatus, including a model electric railway, by Messrs. Symes & Co. Refreshments were provided. Over 170 persons, including ladies, were present, and all seemed to greatly enjoy the

evening. The party broke up about 11 P.M., and were illuminated on their way home by an extensive fire which had broken out amongst the petroleum, cotton, &c, stored in the goods shed of the Shropshire Union Canal Company, and which destroyed about 80,000*l.* worth of property.

EARLY CLOSING.—A special meeting of the Liverpool Chemists' Association was held at the Royal Institution on Tuesday, April 22, at 3 p.m., to which all the chemists of Liverpool and Birkenhead were invited by circular to consider a proposal for "earlier closing." Dr. Symes occupied the chair, and there were 25 persons present, while 83, who were unable to attend, had signed and forwarded by post, the following form of approval:—"I hereby state that the proposal to close chemists' shops in Liverpool, Birkenhead, and District at an hour not later than nine o'clock every night (Saturdays excepted) has my approval, and in the event of not less than nine-tenths of the chemists consenting to close at the above-mentioned hour, I agree to close my place or places of business at the same hour, and to give the movement my hearty support." The president pointed out that there was a tendency amongst all classes to shorten the hours of labour, and that as in Liverpool, there had been some demonstrations lately in favour of earlier closing, which had been well supported by tradesmen generally and had received much public sympathy, he thought the present a favourable time for chemists to act in the same direction. Mr. Albright Booth and Mr. Kirkers (two of the local "fathers in pharmacy") supported the movement, and stated that although the previous attempts to shorten the hours of chemists' labours had not been entirely successful, some good had been done. Messrs. Woodcock, Peet, Barton, Parkinson, Hocken, Aris, Day, Bain, Smith and others, spoke as to the difficulties there would be in getting all to close, partly on account of the different requirement of various neighbourhoods; but all believed 9 p.m. to be quite late enough for keeping open shop, except under some exceptional circumstances. Mr. Peet instanced that at his Mount Pleasant Pharmacy he could close at nine or even eight, but at his Ranelagh Place establishment, which was near the principal hotels, he could not close until ten. Ultimately a resolution was carried, approving of 9 p.m. as the hour of closing (Saturdays excepted), and pledging those present to canvass their neighbours who had not yet assented, with a view to getting them to do so.

LYNN.

SERIOUS CHARGE AGAINST A CHEMIST.—At the Lynn Petty Sessions, on Monday, Samuel F. Smith, chemist, All Saints' Street, an elderly man, pleaded not guilty in answer to a summons charging him with assaulting Edith Ess, 11 years of age. The evidence showed that on the afternoon of April 10 the girl was sent to the defendant's shop for a pennyworth of turpentine, and as she was gone a long time her mother beat her when she came back. She said Mr. Smith had detained her and given her two sweets. The next morning, owing to what she had heard, accompanied by her daughter and neighbour, the mother went to the defendant's shop. In answer to questions, he admitted giving the child a sweet because she had a cold, and also that he took her on his knee. He denied acting indecently towards her. Edith Ess was called, and deposed to going to defendant's shop for some turpentine about 3 o'clock in the afternoon. Defendant told her she had got a very bad cold, and gave her a sweet. He then sat on a chair, took her on his knee, and assaulted her. She kept on telling him to let her go. He had never assaulted her before. The outer door was open, but the inner one, a glass door, was shut. Anyone passing in the street could see them. She did not shriek out, and did not complain to the little girl or to a man who came into the shop. Fuller Smith, son of the defendant, stated for the defence that the inner door leading into the shop was of figured glass, and could be distinctly seen through. Anyone could stand at the street door and see into the shop. Any person could also see through the window if he liked. Mr. Sadler, for the defendant, admitted that he gave the child the sweets and touched her. Such conduct might be indiscreet for an ordinary person, but for a chemist and an old man it was right, and he should have such a licence. The defendant denied the indecency from the first. The alleged assault was committed in a very public place, as people could have entered the shop from the back and front. He submitted that the girl's evidence was entirely uncorroborated. The magistrates' clerk said they might inflict serious injury upon an old man by convicting without any corroborative evidence, and the Bench did not consider there was sufficient evidence, and dismissed the case.

MANCHESTER.

A CHEMIST'S ASSISTANT OBTAINS DAMAGES.—At the Manchester Court of Records, on Tuesday, the case of White *v.* Edwards was disposed of. The plaintiff, Mr. W. S. White, is a chemist's assistant, and the defendant, Mr. George Edwards, is a chemist, carrying on business in Stockport Road, Manchester. The defendant engaged the plaintiff on February 14 last as an assistant, at a salary of 1*l.* 6*s.* per week, and on March 3 dismissed him without the usual month's notice or a month's wages in lieu of notice. The reason given by the defendant for dismissing White was that something was wrong with the cash, and in consequence of this allegation the plaintiff claimed damages as well as his month's wages. The jury returned a verdict for plaintiff for 7*l.* 10*s.*

PLYMOUTH.

HEAVY SENTENCE FOR FORGERY.—George Henry Weston, a clerk, was charged at the Plymouth Quarter Sessions, on April 11, with obtaining by false pretences the sum of 5*s.* from Mr. J. Maurice, chemist, Bedford Street, Plymouth, together with sums from various other tradesmen in the town. He was sentenced to five years' penal servitude.

PORTSMOUTH.

A CHEMIST'S ASSISTANT POISONED WITH CHLORAL.—An inquest was held at Portsmouth, on Wednesday last, respecting the death of Frank Braden (aged 29), a chemist's assistant, who died at a public-house under circumstances of a very painful description. George Humphrys, of Nottingham, stated that deceased was his brother-in-law, and last resided, so far as he knew, at 35 Fore Street, St. Austell's, Devon. He had been worrying himself a great deal lately owing to his failure to pass the final examination of the Pharmaceutical Society. As a boy he had suffered from inflammation of the brain, and witness understood that he had since been subject to recurrences of the same disease. He last saw deceased alive in September last year, when he came home to Nottingham. Sarah Soulsby, of the Railway Cellars, Landport, deposed that at 10.30 on Friday of last week deceased, who was then quite sober, hired a bedroom at that house. She knocked at his door several times the next morning, but received no answer, and on entering the room in the afternoon the deceased was found in bed quite dead. Private J. A. Stowell, Medical Staff Corps, deposed that on Thursday he met deceased in Alexander Road, when he told him that he had failed to pass an examination and wanted to enlist. Witness gave him the necessary information, but on presenting himself on the following morning to be medically examined deceased was rejected for defective vision and deficient chest measurement. He seemed much depressed as he turned away. Other evidence which was called showed that deceased had been in a depressed state of mind for a considerable time past, and had threatened to commit suicide in London. Dr. Lysander Maybury, who was called in after death, stated that death had resulted from an overdose of chloral. Deceased had a weak heart, and a very small dose taken to alleviate pain might have produced death. The jury returned a verdict of "Death from misadventure, through taking an overdose of chloral."

SHEFFIELD.

SHEFFIELD PHARMACEUTICAL AND CHEMICAL SOCIETY.—A meeting was held, on Monday evening last, in the society's rooms, New Gurney Street—Mr. Fox, president, in the chair. A lecture was delivered by Mr. B. W. Windon, F.C.S., F.R.M.S., President of the Sheffield Microscopical

Society, on "The Microscopical Detection of Food Adulterations and Impurities." The lecture was fully illustrated with photo-micrographs shown by means of the limelight. Cocoa, coffee, pepper, and trichinised meat were the subjects to which the lecturer directed most attention. Mr. Humphrey, on behalf of Dr. Collier, presented to the society a herbarium which had been collected by the latter gentleman about twenty-five years since in the neighbourhood of Sheffield, and which came very near getting the Pharmaceutical Society's medal. A vote of thanks was accorded Dr. Collier for his very valuable gift, and Messrs. Clark and Humphrey for the money and time they had spent in putting the collection in order. It was announced by the president that Mr. G. T. W. Newsholme had intimated his intention of presenting annually a prize of the value of one guinea for the best herbarium collected by an associate of the society in the neighbourhood of the town; the conditions of the competition to be arranged by the council.

IRELAND.

A Christian Chemist.—A postal packet addressed to "The Christian Chemist," has been received at Dublin, but although shown to several of the craft, it is now in the Dead Letter Office endorsed "Not known in Ireland."

Keeping with the Times.—With the object, doubtless, of displaying his "patriotism," an Athlone druggist has brought out a beverage under the name of "the Plan of Campaign."

Contract Appointments. — Messrs. Leslie & Co., chemists and druggists, Bride Street, and Mr. Corcoran, Stephen's Green, have been respectively appointed contractors for drugs, medicines, and medical appliances to the South Dublin Union. Several tenders were received.

Obituary.—The death at Belfast is notified of Mr. Hugh Robinson, aged 45, founder and ex-president of the Ulster Naturalists' Botanic Club. At Enniscorthy, of Mr. Philip Minchin Cooke, L.A.H., aged 80. The deceased, who was probably the oldest apothecary in Ireland, is deeply regretted by a large circle of friends. At Waterford, of Mr. J. F. Scott, L.A.H.; and at Dublin, of the wife of Mr. W. F. Wells, chemist and druggist.

Process by a Chemist.—At the Cork Quarter Sessions last week a process was brought by Mr. Richard Sunner, pharmaceutical chemist, Cork, against Mrs. Arthur D. Reeves, widow of the late Colonel Reeves, Kinsale, to recover 4*l.* 8*s.* 7*d.*, for goods sold. From the plaintiff's statement it appeared the debt was incurred by the defendant's husband in purchasing medicines and perfumery for his wife. The defence was a denial of liability, as the articles had been ordered without defendant's authority, and the Recorder dismissed the case.

L.P.S.I. in the United States.—The replies received to Mr. James Hartford's inquiries regarding the action of the various State Boards of Pharmacy to the diploma of the Pharmaceutical Society of Ireland, show that there are few States indeed in which Irish pharmaceutical chemists could practise without further examination. Georgia, as has already been reported, accepts the licence, and South Dakota has accepted it in one case, and perhaps North Dakota would do so, as well as Nebraska. It is doubtful whether Maine would accept it without a *pro formâ* examination. Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York State, New York (Erie country), Ohio, and South Carolina, cannot, under any circumstances, register Irish licentiates without examination. Replies have still to be received from Alabama, Connecticut, Florida, Louisiana, North Carolina, Rhode Island, and a few more States.

The Cork Workhouse Drug Contract.—At the meeting of the Macroom Board of Guardians on Saturday a difficulty arose with reference to the supplying of the workhouse with medicine. It appears that some time ago, when the quarterly supplies of medicine to the union were being considered, two firms tendered for the contract—Messrs. Harrington (Cork), and Sewell (Killarney). The guardians then invited the several dispensary doctors to express their opinions on the samples submitted, when the medical men were unanimous that Messrs. Sewell were the cheapest, but that Messrs. Harrington's compounds had always given greater satisfaction. After a lengthy discussion and on a poll being taken, Messrs. Harrington were declared contractors. At the next meeting of the Board the chairman proposed a motion, which was carried, rescinding the former resolution and transferring the contract to the lowest contractor, Messrs. Sewell. With reference to the matter, the Guardians received a letter from the Local Government Board on Saturday, disapproving of the action they had taken, and recommending them to re-advertise for tenders, but the majority of the guardians declined to adopt this course, especially as the inmates of the house had consumed no small amount of the medicines of the successful competitor. A resolution was then passed calling on the Local Goverment Board to endorse the guardians' action in declaring Messrs. Sewell the contractors.

SCOTLAND.

Dumfries.

A Fatal Mistake.—It is reported that a child of fourteen months has died here this week from opium-poisoning. It appears that the child had been ill, and the mother sent to a local chemist for a pennyworth of ipecacuanha wine, of which she gave it a teaspoonful; but it became worse, and a doctor was sent for. From the drowsy condition of the child, he thought that it must have got alcohol in some form; this, however, the mother denied, and showed the doctor the ipecacuanha-wine bottle. He found this to contain laudanum. The child did not recover, and a post-mortem examination, which has been made, confirms the opinion that death was due to opium-poisoning. It appears that an apprentice supplied the medicine, and labelled it "ipecacuanha wine."

Dundee.

Mr. James McDonald (from Messrs. McMillan, Glasgow) has been appointed to the vacant dispensership of the Dundee Royal Infirmary.

The late Mr. William Jobson.—The inventory of the personal estate of the late Mr. W. Jobson, formerly chemist, Dundee, thereafter residing at Mount Ericht, Blairgourie, where he died on January 25 last, has been lodged with the sheriff-clerk of Perthshire to be recorded, and amounts to 20,673*l.* 19*s.* 2*d.* Mr. Jobson for many years carried on business as chemist and drysalter in the Murraygate, Dundee, which is now carried on by Messrs. Johnston & Adams.

Assistants' and Apprentices' Association.—A meeting was held on Monday—Mr. W. Edwards, president, in the chair—specially in honour of Mr. Thomas C. Henderson, the late honorary secretary of the association, who is to commence business on his own account in Stornoway. Mr. Mair, on behalf of the members, presented Mr. Henderson with a handsome dispensing balance (Stone's), and expressed in complimentary terms the good wishes of the association for his future welfare. Mr. Henderson was subsequently elected an honorary member of the association.

Glasgow.

An Ethnic Series.—The "Pawnee Medicine Man" having come and gone, we are now being honoured by a visit from the "Cherokee Healer." Evidently the "Red Man of the Forest" is on the war-path.

Bovril.—A large white bull, gaily caparisoned and bearing the legend "Bovril" in prominent letters on side-cloths, is being daily led through the principal streets, and creates quite a sensation wherever it goes.

Druggists' Hours.—This perennial of newspaper correspondence is at present in full bloom in a local paper. Most of the writers seem to be outsiders, there being a surprising unanimity among them as to the guilt of the master druggists in subjecting their servants to such cruelly long confinement for such miserable wages, and no word of the unreasonableness of the public in practically demanding that shops should be kept open late for their convenience—an aspect of the question to which greater attention was directed at a meeting of shopkeepers and assistants held on Monday evening for the purpose of forming a union to

promote early closing and general organisation among that class. In discussing the means to be taken to this end, it was suggested that the city clergy should be requested to appeal to their congregations to aid in the movement, and a committee was appointed to further the objects of the meeting. Curiously enough, in the list of committee-men, which comprised employers and employés, there is not a solitary representative of the drug trade, and not a single suburban trader. It is even whispered that the most enthusiastic advocates of early closing are those shopkeepers in the central district, where business is over by 6 P.M., and who are damaged by suburban competition after that hour.

KEITH.

DRUGGISTS' WINE LICENSES.—At the recent County Licensing Court Mr. Macpherson, druggist, Dufftown, applied for a transfer of a dealer's licence formerly held by Mr. William Sangster, and Mr. Smith, druggist, Aberlour, applied for a renewal of a dealer's licence. The Procurator-Fiscal objected to granting either of the applications, on the ground that, being chemists, the applicants had to open their places of business on Sunday for the sale of medicines. This, of course, would mean a licensed dealer opening his premises on Sunday, which is contrary to the Act. The Justices considered that for a druggist to make up a prescription on Sunday in his shop was not opening his premises for business in the sense of the Act, and they accordingly granted both applications.

General News.

THE FARBENFABRIKEN (vorm. Fr. Bayer & Co.) in Elberfeld have registered a trade-mark in Germany for a new medicinal preparation which they call "Chinaën."

THE SEVENTH ANNUAL MEETING of the Union of German soap manufacturers will be held in Stuttgart from 16 to 18 July next. An exhibition of machinery, utensils, and ingredients for soap-making will be held at the same time.

CAUSTIC SODA IN FLAKES is now being made by the Pechiney works in Salindres. It is prepared by allowing the soda liquor to run from a funnel between hollow rollers cooled with water from within. The liquor thus hardens in thin leaves, which are said to render it particularly handy for use.

CARBOLIC POISONING.—On April 16 a young man named Samuel Henry Prior, living at Kent House Road, Penge, was found by his father lying dead in bed. A medical man who was called in expressed the opinion that death resulted from carbolic poisoning, and it is supposed that the deceased committed suicide.

THE CHEMICAL INDUSTRY IN GERMANY.—In 1889 the net profits of the aniline works of Meister, Lucius & Brüning, in Höchst-on-the-Main, who are also manufacturers of antipyrin, were 5,437,032m., against 4,244,795m. in 1888. The Oramenburg chemical works have made 111,919m. profit, against 117,700m. in 1888.

A WILL WRITTEN ON A PRESCRIPTION.—The Registrar of Wills at Philadelphia, U.S., has admitted to probate the will of Mary H. Beresford, which was found between the leaves of a book and written on the back of a physician's prescription. It bequeathed an estate of upwards of 30,000*l.* to numerous charities and old friends. The writing of the will was almost illegible, but it had been duly attested according to law.

DAMAGES FOR A TRAMCAR ACCIDENT.—Damages to the extent of 100*l.* have been awarded to Mr. Matthew B. Brown, chemical manufacturer, 3 Afton Crescent, Ibrox, near Glasgow, for injuries sustained by that gentleman in September last. Mr. Brown was thrown into an excavation in the roadway, and severely injured, owing to the carelessness of a driver in the employ of the Glasgow and Ibrox Tramway Company.

FIRES.—On Friday, April 18, a fire occurred at the premises of Mr. A. H. Rucketts, chemist, Market Place, Penzance. The fire, which was caused by the spontaneous ignition of a box of matches, did not become dangerous, and was quickly subdued on the arrival of the fire-brigade.—A fire broke out on April 18 at the premises of Mr. R. Redpath, chemist, 211 Canongate, Edinburgh. The damage done is estimated at a few hundred pounds.

IT is reported that negotiations are progressing with the object of uniting the whole of the German ultramarine factories into one large concern, and that all the proprietors have already signified their adherence to the principle of fusion. A few works, it is thought, will be prevented from joining the union for technical reasons, but arrangements have been made with them under which they will turn over the whole of their production to the union.

DRUGGISTS AND THE LIQUOR LAW IN DAKOTA.—The druggists of Aberdeen, South Dakota, on March 17, signed an agreement to keep no liquors after May 1, and it is believed the agreement will be followed generally throughout the State. They object to the Prohibition Act, especially those provisions requiring petitions signed by twenty women necessary to secure permits, the 1,000-dollar bond clause, and the general "humiliating features of the measure, which are an outrage on reputable druggists."

THE LANCASHIRE ALKALI COMPANY (LIMITED) appeared at the Liverpool Chancery Court on April 15, on a petition for the compulsory winding up of their affairs. It was stated by the company's representative that arrangements had been made for the voluntary winding up of the company, and voluntary liquidators had been appointed. As this course would save expense and greatly benefit the company, Judge Bristowe agreed to it, and allowed petitioner's costs as between solicitor and client.

PROFIT-SHARING appears to be making some way in German industry. Last week the proprietors of the Berlin firm of J. D. Riedel, manufacturers of pharmaceutical preparations, celebrated the completion of the seventy-fifth anniversary of their business by a dinner to their employés, 200 in number. On that occasion it was announced that in future an annual bonus varying between 30m. and 80m., according to the profit of the business, will be paid to all employés who have been at least five years in the service of the firm.

EAU DE COLOGNE IN AUSTRIA.—Messrs. A. Baiser and S. Hecht, proprietors of one of the eau de Cologne firms trading under the name of J. M. Farina, have just been prosecuted, and sentenced to a fine of 50 florins and the prohibition of selling their goods in Austria, for advertising eau de Cologne as a medicine in that country. It appears that under an Austrain law dating from 1815 eau de Cologne may be employed as a perfume only, and that it is strictly prohibited to claim any medicinal virtues for it. Signs over shops selling the article may only bear the legend "Eau de Cologne sold here," and no other.

THE EXPLOITATION OF THE MINERAL SPRINGS in the possession of the Prussian State for the year 1888–89 shows a profit of 550,902m., of which 428,695m. was contributed by the sale of water from the springs, and 122,207m. by the working of the baths. The total revenue of the bathing establishments was 683,027m., the expenditure 560,820m. Three bathing establishments and one spring were worked at a loss. The springs at Ems yielded the largest profit—viz., 296,119m., Niederselters being next with 94,469m. Of the baths Ems also heads the list with a profit of 71,257m., then comes Norderney, with 39,776m., and, thirdly, Schlangenbad, with 17,144m.

EMBEZZLEMENT BY A CHEMIST'S CARMAN.—On April 17 George Meakin, a young man, was charged by William Fletcher, chemist, Bath Street, Ilkeston, with embezzling the sum of 1*s.* 8*d.*, which he had received for the prosecutor when employed as his servant, on September 2 last. Prisoner was employed to deliver, in a cart, stout and mineral water, and was authorised to receive payment from customers on behalf of the prosecutor. He was discharged in February last, and it appeared from his books that he had received various sums of money without accounting for them. One case was gone into. Defendant said he did not

do it intentionally; he was a bad scholar, and had made mistakes in his entries. He was fined 2*l.* 10*s.* and 1*l.* 12*s.* costs, or one month. The money was paid.

Poisoned Flesh.—The Poisoned Flesh Act of 1864 was passed to prohibit the placing of poisoned flesh and poisonous matters in plantations, fields, and open places. Under this enactment, if a person knowingly places or causes to be placed on any land flesh or meat which has been mixed with, or steeped in, or impregnated with poison or some poisonous ingredient, so as to render it calculated to destroy life, he is upon summary conviction to forfeit a sum not exceeding 10*l.* This, however, is not intended to prevent the occupier of a building or the owner of a rick from placing in it, or in the garden, or in the drains, some poisonous preparation for the destruction of vermin. In a Bill now introduced by Mr. Francis Stevenson, M.P., it is proposed to make the statute applicable not only to flesh or meat, but to all animal substances which have been made poisonous.

English Syndicates and American Soap-makers.—The *Oil, Paint, & Drug Reporter* states that a suit to recover $100,000 has been begun against Charles S. Higgins, a New York soap manufacturer, by Wilson & Hedenberg, brokers, of 111 Broadway, New York. It is asserted by the plaintiffs, who are said to represent English capitalists anxious to invest in American enterprise, that some time ago Mr. Higgins entered into an agreement with them, whereby he was to receive $615,000 in cash for his business, and a controlling interest in a stock corporation with a capital of $2,500,000. He was also to receive a salary as manager of $15,000 a year. This agreement was afterwards amended so as to give Mr. Higgins $1,500,000 in cash and $500,000 in stock, his real estate to be included in the purchase; and the brokers now claim their commission. It is understood that Mr. Higgins denies having made the agreement.

In East Orange, N.J., Messrs. Seabury & Johnson have one of their factories, and the firm is very liberal in admitting pharmacy students into it to see how rubber plasters are made. Recently the students of the Philadelphia College of Pharmacy visited the factory, and they were followed three weeks later by the "boys" from the New York College, Professor Bedford at their head. Whether the latter contingent had heard or not that Messrs. Seabury & Johnson provide as good suppers for students as plasters to sell, we do not know, but they were prepared with a song of a stirring character written by one of themselves. This they sang over and over again to the tune of "Marching Through Georgia." It was not bad. One of the best verses was the second:—

The girls at S. & J.'s are nice, so all the fellows say:
They captured two of last year's boys who ventured out that way;
You'd better mind your P's and Q's and not too near them stray,
For they are natives of Jersey.

The chorus ran thus:—

Hurrah! hurrah! we sing the jubilee,
Hurrah! hurrah! hurrah for Seabury.
There are no flies on our friend George,
As you can plainly see;
Neither are there any flies on Jersey.

Smart Capture by a Chemist.—Lately a series of frauds have been perpetrated in the North and East Ridings of Yorkshire by an individual representing himself to be the traveller of certain wholesale firms dealing in the goods of which his victim for the time being was the vendor. His assertion was that the regular traveller was suffering from the Russian influenza, and unable to make the round. Not having his account when asked for it, he in several cases persuaded the unsuspecting shopkeeper to show him the last invoice, by which means he learned the amount of the account he was to receive, and the correct signature of the firm he was supposed to represent, the latter of which he duly made use of in receipting the account. Several complaints were made to the police, and the shopkeepers of Stockton, Middlesborough, and Hartlepool were put on their guard, with the result that on Friday of last week the gentleman was arrested. On that day he entered the shop of Mr. Bailes, chemist, Hartlepool, representing himself as the traveller of Messrs. Southall, Birmingham, and endeavoured to carry out the ingenious procedure mentioned above. Mr. Bailes, however, mindful of the warning from the police, inquired where the former traveller of the firm was, knowing him to have left some three years ago. Upon receiving an answer that he was suffering from cataract of the eye, Mr. Bailes thought it was time some inquiry should be made as to the personal identity of his informant, and at once handed him over to a passing constable. It was found that he was "wanted" at Scarborough, where he was conveyed the next morning.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

Leprosy is reported to be on the increase in New Caledonia. The disease first made its appearance some two years since, and has so far affected native Kanakas only. Several special hospitals have been established in the colony.

The Statue of Dr. Brooa, owing to the opening of the Boulevard Saint-André-des-Arts to the Hôtel des Sociétés Savantes, is to be removed, and erected in one of the courts of the Faculty of Medicine. Danton's statue will be placed at the other end of the same open space, which is not to be disturbed. The new thoroughfare gives easy access to the hall in question, which will probably be remembered by English pharmacists as the meeting-place of the Therapeutic Congress during last summer.

Counterfeit Snuff.—A man was arrested a few days since, at No. 24 Rue Maître-Albert, for encroaching on the State tobacco-monopoly. The prisoner for some time had been manufacturing snuff with spent tan-bark, besprinkled with ammonia, and probably mixed with a little of the real article. The stuff, at 3*s.* a pound, had, it seems, ready sale and many appreciative customers. The police seized nearly a hundred pounds of the finished produce, and three or four times as much of the material to make it.

A Franco-Dutch Hospital is soon to be opened in the Rue Championnet, on the Montmartre Heights, where the Dutch colony have purchased a very large hotel with extensive grounds, very suitable for the purpose. Although intended especially for natives of the Netherlands, the institution is to welcome also French patients when the Paris hospitals are overflowing. Sisters will be placed in charge, and patients of all religions treated alike. The head physician is to be Dr. Thyssen, who is a graduate of both the Amsterdam and Paris faculties. The pharmacist has not yet been designated.

Opposing the Pharmacy Bill.—At the last meeting of the Seine Medical Society, with Dr. Bourneville in the chair, several members complained that in populous neighbourhoods pharmacists will prescribe for all comers, in violation of the present pharmacy law. They were of opinion that section 9 of the Pharmacy Bill, empowering pharmacists to "dispense non-poisonous medicines when expressly called for," will greatly increase the evil. In consequence they announced their intention of opposing that section, and causing the old clause to be retained, whereby pharmacists "shall dispense or deliver no medicine or drug of any sort, without a physician's prescription." Although the society, as a whole, declined to entertain so illiberal a proposition, some physicians seem to be on the war-path against the Pharmacy Bill.

Hysteric and Epileptic Urine.—From a memoir presented to the Academy of Sciences by Drs. Gilles de la Tourette and Cathelineau, it seems that during attacks of hysteria the patient's urine shows a decrease of the fixed residue consisting of urea and phosphates; the usual proportion of phosphates is, besides, altered—that is, alkaline phosphates, instead of weighing three times as much as the earthy, always dwindle down to twice the quantity, and are often found in the same quantity only. In epileptic attacks, on the contrary, there is a considerable increase of fixed residue, and the proportion between phosphates remains

normal. Dr. Charcot, who read the paper on behalf of the writers, remarked that the experiments exactly confirmed his theory, and afforded, at the same time, a possible chemical method of detecting simulated fits, which are known to be very common.

Appliances for Red Phosphorus Matches.—Government now being in the lucifer-match business, finds itself compelled to supply also the needed sundries for their use. Among these are the peculiar powder and the striking-paper ready-made therefrom, which are necessary for igniting that sort of matches. It may interest English dealers in the same articles to know the prices-current just established here. The net price to wholesale dealers (who must at the same time order corresponding quantities of matches) are as follows: Powder, per box of twenty 50-gramme phials, 10.50f., which shall be sold to retailers 1.30f. the two phials, and by them retailed at 0.75f. (7½*d.*) apiece to the public. Striking-papers (frottoirs), per box of 100 papers, put up in 10 packets; to wholesalers, 2.90f. (2*s.* 4*d.*) a box; to retailers, 0·35f. (3½*d.*) a packet; and to the public, 5 centimes (½*d.*) apiece.

Péligot (Eugène-Melchior) died last week at the age of 79. He was born in Paris, graduated in 1829 from the Central School of Arts and Manufactures, and in 1832 became the pupil and collaborator of the celebrated chemist J. B. Dumas, writing with him memoirs on wood alcohol and its ethers, oil of cinnamon, ethal, camphor, turpentine hydrates, &c. He was in 1835 appointed to the Central School, first as professor of applied chemistry, and afterwards of glass-making and analytical chemistry. While there, he published important works on the art of glass-making, also on analytical chemistry. In 1846, he became the professor of industrial chemistry at the Arts-et-Métiers Conservatory, where he remained for 40 years, being at first supplemented and finally this year succeeded by Professor Jungfleisch, of the College of Pharmacy. In 1847, he discovered uranium and its value for glass-colouring. In 1852, he was elected to the Academy of Sciences, and in 1880 appointed chief of the assay laboratory at the Paris Mint. The Academy, on April 21, in token of mourning, adjourned soon after meeting.

The Navy Health Service Bill is, as regards pharmacy, materially different from the new army regulations now in force. It provides for the establishment of a school for the navy health service, conveniently near to one of the State Faculties, where students shall complete the last three years of their medical education, or the whole of their pharmaceutical education, and for three annexes of the institution in different military seaports, where candidates for the medical degree may attend the first year's lectures for the doctorate. The selection of the locality for the central school is left to the Minister of the Navy. Bordeaux and Marseilles are the principal candidates. When Bordeaux failed to get the military school given to Lyons, she was almost promised the naval school as a compensation; the city has a thriving Faculty of medicine and pharmacy, full of scientific life and promise. On the other hand, Marseilles is by far the more important seaport. She has no Faculty, but has been long asking for one, and took the occasion of President Carnot's visit to again petition for it. As it is not at all impossible that the reqnest will be granted, the contest is quite interesting.

GERMAN PHARMACEUTICAL NEWS.

(From our Berlin Correspondent.)

The Botanical Gardens here have been in part newly laid out in geographical divisions, and the sections which contain representatives of the flora of the various parts of the northern temperate zone are now complete.

A Chemical Works Celebration.—The chemical factory of Riedel, which a few days since completed the 75th year of its existence, and duly honoured the occasion with the usual festivities, has developed from the Swiss Apotheke in Berlin. This firm has lately resolved to give to every workman who has been connected with the house for five years an annual bonus which varies from 35*s.* to 80*s.*, according to the state of business.

Chloroform as an Anæsthetic is not just now regarded with much confidence in England, judging from the later literature. This doubtful attitude is not at all prominent in this country, where the liquid is almost exclusively used in operations. At the Surgical Congress of this year, the chloroform question came up for discussion, but although one or two spoke in favour of ether, the general opinion evidenced a partiality for chloroform alone.

Phenylurethan, chemically pure, is about to be introduced into commerce and to the medical profession on the suggestion of Professor Giacosa. This means another addition (from the house of Dr. Heyden) to our already considerable list of antipyretics, while also it has been successfully used as an antirheumatic. As an antipyretic the dose is 8 grs., which is said to be equal in therapeutic activity to 15 grs. of antipyrin; as an antirheumatic the dose is somewhat larger.

Trichloracetic Acid which has been known for some years and used here and there as an application to warts, corns, &c., has been exhaustively tried as a caustic in 140 cases, by Dr. Ehrmann. This observer prefers it to chronic acid, which has of late years been largely in vogue, especially in nasal and pharyngeal diseases. As an astringent he also found it serviceable in the following proportions:—Iodine, 2 grs.; iodide of potassium, 3 grs.; trichloracetic acid, 5 grs.; glycerine to 1 oz.

A Strike in the Quinine Industry.—The fifty or more employés of the quinine manufactory at Auerbach "came out" the other day on strike for increased wages. As influential support they specially secured the services of the M.P. for Darmstadt, who is an active Socialist, and who was to have championed the cause of labour against the proprietor of the works. Unfortunately for the workmen the scheme was nipped in the bud by the heroic but simple measure adopted by Director Seyferth, who declined altogether to treat with the representative selected by his employés. Considering the feeble condition of the quinine market, owing to over-production, perhaps a suspension of operations in this manner would not be without some beneficial aspects.

AN OLD MORTAR.

In our recent description of Messrs. Hearon, Squire & Francis's new premises in Southwark Street, S.E., we mentioned that they have some curious old mortars in use, which, as far as the present partners and the oldest employés are aware, have been in the firm as long as its records take it back. We were specially struck with the excellent condition of one of the mortars, which is made of bell-metal, and is over a gallon in capacity. The inscription on this mortar shows that its maker was Joseph Talcott, and it bears the date 1686. We have seen much older mortars than this, and some with inscriptions and decorations perhaps a little more quaint; but it is seldom that we meet with mortars which have been in continuous use for over two centuries, and are still as good as on the day they were cast. The sketch which accompanies this shows that the mortar is of the most approved shape. It will be noted that I stands for J, and that Mr. Talcott reversed his S.

Voice Tonic.—There is nothing better to give tone to the voice and to remove hoarseness or harshness than vinegar of squills. Five or six drops in half a tumblerful of warm water used occasionally as a gargle will generally have an excellent effect.

CANADIAN NOTES.

THE professors and the council of the Ontario College of Pharmacy have succeeded in patching up their difficulties, Mr. Shuttleworth retaining his position at a salary of $1,800, and Dr. D'Avignon his at $800 less.

IN British Columbia there is no Pharmacy Act, and although the druggists agreed upon a Bill recently, they have found it impossible to get it introduced into the House of Parliament owing to its unpopularity.

THE MONTREAL COLLEGE OF PHARMACY has acquired new premises at 595 Lagauchetiere Street, and it is expected that entrance will be effected before the beginning of next session. The premises, with alterations, are put down at a cost of $10,000, half of which has been subscribed, including $500 subscriptions from several of the leading wholesale houses.

THE ONTARIO COLLEGE COUNCIL has resolved to remove the professors from their privilege of being *ex-officio* members of the boards of examiners, and in future the questions will not be published, nor will interested parties be informed what marks candidates have taken. At the same time they agreed to pay each examiner $20 for each examination, and 50c. for each student in excess of fifty examined, as well as the same railway fare which is paid to members of the council.

AN APPLICATION affecting the interests of chemists coming to Canada from Great Britain was brought before the Council of the Ontario college recently. This was made on behalf of Mr. Herbert Elborne, late of Cambridge, England, and now of Toronto, who claimed to be registered on the Minor certificate of the Pharmaceutical Society of Great Britain. Mr. Elborne considered that he was entitled to registration. The council did not think so, but entertained the petition, and agreed to register the applicant on payment of the $10 fee permitted by the Act. In a discussion which followed it was stated that this case would not set up a precedent, as every application has to come before the council, and is considered on its merits. There was a similar case in August last which was refused.

THE MANITOBA PHARMACEUTICAL ASSOCIATION, which has the direction of pharmaceutical affairs in that province, granted to the association by an Act passed last year, held its annual meeting in Winnipeg last month. Mr. B. M. Caniff, Portage la Prairie, president, directed the affairs of the meeting. It appears from the report which was submitted that two persons have passed the examination entitling them to start in business, and three have passed the assistants' examination. There are forty-five registered pharmaceutical chemists in the province, nine certificated assistants, and eighteen apprentices. The association has funds in hand, and is altogether in a fairly prosperous condition. There is some prospect of affiliation with the Medical College, whereby the association would be connected with the University of Manitoba.

COUNTER-PRESCRIBING.—Under the direction of the Medical Council, a few more druggists have been prosecuted for counter-prescribing, but only two cases have come into court, and one of these is still undecided. It appears from the report of the other that the detective employed by the Medical Council went into Mr. J. A. Musgrove's store in Ottawa and asked for something for a headache. He got 5 cents' worth of pills, and was asked to call next morning to report. He did so, when Mr. Musgrove asked to see his tongue, and prescribed a 30-cent tonic. A witness deposed before the magistrate that the medicines supplied were not worth more than half the price charged, and the magistrate, holding that the margin of profit was sufficient "hope or gain of reward" to constitute practising medicine, fined Mr. Musgrove $25. This is a very different interpretation of the law from that given by the Bellville magistrate at the beginning of the year (see THE CHEMIST AND DRUGGIST, February 1, page 149), and one peculiarity of the present case is that the magistrate stated his opinion that druggists have no right to recommend patent medicines or to tell their customers the dose of quinine. It is expected that a test case will be taken to a higher court, and there is some hope that the judges may take a more common-sense view of the matter than the Ottawa magistrate.

SIR JOHN LUBBOCK ON THE FORMS OF LEAVES AND COTYLEDONS.

AN interesting lecture on this imperfectly-treated department of botanical science was delivered by Sir John Lubbock, on April 19, at the Working-men's College, Great Ormond Street, W.C. The lecturer first explained the functions of the hairs so often found on the under surface of leaves. In this position the hairs afford protection to the stomata which are commonly found on the under surface, the ordinary poplar being a striking instance. In cases where the atmosphere is often highly charged with moisture, the hairs are of service in getting rid of the excess of deposited moisture; in Alpine plants they form a protective shade against too much light and heat, and in the case of prickly hairs they are of use in the plant's struggle for life when threatened by the attacks of animals and insects.

Deciduous leaves are characteristic of a cool and moist atmosphere, whilst evergreens develop more vigorously in mountainous and tropical regions. The gloss of evergreens is serviceable in enabling the plant to throw off snow, and the frequent occurrence of the stomata in pits is due to the nature of the environment.

As a general rule, broad leaves are found in recumbent positions, and are few in number, whilst long leaves occupy aerial situations, and are more often tufted, or whorled. *Drosera* and *Plantago* both possess species which exhibit these differences.

The thickness of the twig upon which leaves are borne bears a direct relation to the number and shape of the leaf-surfaces it carries. The general arrangement of the leaves upon the branch is such as to ensure a good share of sunlight, and the shape of the leaf is influenced not by any innate property, but by the distance between successive buds. In the Spanish chestnut the leaves are suspended upon a stronger stem than is the case with the beech, but the distance between the buds is nearly equal in both instances; the breadth of leaf, therefore, remains about the same, whilst the length becomes greater in the chestnut. In *Populus nigra* the leaves overlap, but they are suspended vertically, and both surfaces are nearly identical, whilst in other species of poplar where the normal arrangement obtains no overlapping occurs, and a distinct difference between the upper and lower surfaces is evident.

The Conifers exhibit some curious anomalies, which the lecturer had carefully investigated. The needle-shaped leaves vary considerably in length; in the spruce they are quite short, in another species three times the length. The spruce retains its leaves for several years. One hoary conifer had not changed its attire, he declared, for eighteen years; but in the long-leaved variety this is an annual operation. Sir John believes that the length of the leaves is in these cases "a function of the thickness of the stem and of the number of years they remain on the tree," though climatic considerations must also be taken into account.

The oak leaf he dwelt upon as being peculiar in outline and never symmetrical. It has been suggested that the indentations noticeable in oak-leaves permit light to pass through the upper parts of the tree to those beneath; but this is untenable. The bud of the oak is small as compared with the leaf, consequently the latter must be closely packed to enable it to lie between the outer scales. In the evergreen oak of south Europe the leaves bear a close relation to the scale leaves, and they lie straight; but as the oak travelled northwards they grew larger, and were obliged to fold themselves, and by an ingenious contrivance it was shown how this folding must inevitably produce a sinuate margin and an unsymmetrical leaf.

The last instances of normal and abnormal leaf-forms given were those of *Viburnum plantana* and *V. opulus*. In the original type (*V. plantana*) the young leaf is efficiently protected by its hairy character, and it retains its regular outline. *Viburnum opulus*, on the other hand, has diverged considerably from the early form, and possesses two small glands at the base of the abruptly-terminating blade, and still lower a pair of slender stipules. The divergence is probably due to the smooth surface and succulent structure forming an attraction to many caterpillars; the plant develops honey-glands, which in turn attract ants and bees,

and these attack the caterpillars. The shape is dependent upon the conditions of vernation, and the two stipules were shown to fill a small space which would otherwise exist when the young leaves were folded in the bud.

Proceeding to the second half of his subject, Sir John pointed out that the cotyledons, or seed-leaves, differ considerably in form when compared with the leafy organs which appear subsequently. The form of the cotyledon is usually guided by the shape of the seed. In *Malva* the cotyledons are longer than the seed, hence they are folded in the embryo, and by taking a piece of paper and appropriately folding and cutting it, it was seen that a form precisely similar to that taken on by *Malva* when expanded could be easily accounted for.

The cotyledon of the lime is most unusual in form, resembling the open hand with extended fingers. The seed in the case of this plant is cup-shaped, and the cotyledon lies flat within it. If a piece of paper be placed in a basin, it must be slit in several places to enable it to fit closely to the bottom, and if it be afterwards removed and spread out, a somewhat star-like appearance would result. Such was the explanation of the uncommon cotyledon under notice.

The two cotyledons are rarely identical in size; the fact that one is enclosed within the other explains this difference. In geranium one half of the cotyledon is greater than the other; this is due to the half of one cotyledon being overlapped by the half of the second. The strangely convoluted edible portion of the walnut consists of the cotyledons, though they never appear in the growing stage outside the seed. Pterocaya has a four-lobed cotyledon, derived from the four leg-like processes which characterise its fruit, and down which the cotyledon gets thrust. In walnut the lobes are doubled up, and its crumpled character is all that now remains to remind us of the time when the young walnut put forth a cotyledon, as unique in its way as is that of Pterocaya.

The author pointed out the dependence of form in seeds and fruits upon the method best suited for distribution, and concluded his remarks by showing that this shape is generally impressed upon the cotyledon.

MATERIA MEDICA PROBLEMS.

On April 17 a paper with the above title was contributed by Mr. E. M. Holmes, F.L.S., to a meeting of the Chemists' Assistants' Association. The author first commented on the change that has taken place in the last forty years in the signification of the term "materia medica." In the days of Dr. Pereira it included all that botany, zoology, chemistry, and microscopy, and the practice of medicine could reveal concerning the materials used in medicine; now the increase of knowledge has led to differentiation.

The medical profession have to a great extent shelved the study of botany and materia medica, in the strict sense of the term, and have developed the therapeutical side of the subject, so that in the medical schools and universities of Great Britain materia medica now means nothing more than the therapeutics of the subject. On the Continent the microscopical study of drugs has been as much developed as it has been neglected here, and the names of Berg, Moeller, Vogl, Herlandt, Godfrin, and Noel are familiar in this connection. The study of drugs as revealed by the microscope is appropriately termed "pharmacognosy," whilst the branches of materia medica relating to their physiological action and employment as therapeutical agents have been termed "pharmacology." The same idea of development is noticeable also in the relegation to chemistry of many bodies formerly known to occur in drugs, but now capable of being prepared by synthetical means. Similarly the strides that botany has made on the biological side, and the discovery of such bodies as pepsin, diastase, emulsin, as well as saccharomyces and bacteria, all of which have a distinct bearing in the life-history of plants, entitle this study, too, to separate treatment.

In view of all this there have been those who, ignorant of pharmacognosy, have asked, "When chemistry and botany are taken from materia medica, what is left?" It would be hardly less reasonable to ask, "When mathematics and physics are taken from astronomy, what remains?" But chemistry can never be entirely eliminated from materia medica, for many of the bodies obtained from plants have not been studied further than the mode of extracting them, and their position in chemical classification is still undetermined. The active principle of Indian hemp, ergot, lobelia, and many others, are illustrations of this. The position of botany in its relationship to the subject is equally well assured, in spite of the fact that a botanist who has not paid special attention to the structure of drugs would not be prepared to say whether a given fragment of a leaf be that of belladonna or stramonium, or whether another was conium or chærophyllum, or to distinguish between the leaf of digitalis and that of *Inula conyza*.

Pharmacognosy avails itself of the differences in drugs, whilst chemistry and histology bring to light and utilise them for ascertaining the identity of drugs, and determining their quality and freedom from adulteration; and thus, while dependent upon both botany and chemistry, forms a distinct branch of knowledge.

Every drug has distinct peculiarities of its own, which may be morphological, structural, histological, or chemical, by which it may be distinguished from every other, and the study of these peculiarities and the application of the facts thus obtained constitute the branch of knowledge formerly termed "organic materia medica," but which the author thinks is more appropriately termed "pharmacognosy," and it is in this sense that he uses the term "materia medica" in the discussion of the subject.

The unsatisfactory state of our knowledge with regard to many articles of materia medica is painfully evident. In some the active principle has never been isolated; in others several different bodies have successively been stated to represent the activity of the drug; in others, again, we are in total ignorance of the state of combination in which the active principle exists in the plant, and whether or no the natural compound possesses any advantage, from a therapeutical point of view, over the commercial and official preparations.

We know very little of the composition of many of the volatile oils, and still less of the conditions under which they vary, whilst we conceal our ignorance of a large class of amorphous bodies possessed apparently of physiological action under the vague and elastic term of "resinoid."

So much excellent work has already been done concerning coca, podophyllum, belladonna, caffeine, physostigma, strophanthus, boldo, jaborandi, cod-liver oil, &c, that it may reasonably be expected that in the course of a few years the pharmacist will be in a position to determine not only the purity of all his alkaloids, but to estimate the alkaloidal strength of many more preparations than is at present the case, and that he may be able to supply chemically pure active principles, so that the therapeutist may be able to indicate the particular preparation of the drug that will best suit his purpose.

Jaborandi, physostigma, and some others, possess active principles which have different and, in certain cases, antagonistic physiological properties; it remains for the pharmacist to eliminate the one or the other by the aid of his chemical knowledge, according to the desire of the prescriber.

Aconite.—The problem here is how to obtain aconite root uniform in strength, how to ascertain the chemical purity of the alkaloid, and how to determine the alkaloidal strength of the preparations. Notwithstanding the investigations of numerous workers there still remains so great a variation in the active principle of this drug as supplied in commerce that the preparation of one manufacturer is said to be 70 times as strong as that of another, and German aconitine is said to be 10 times less active than the crystalline variety. We are dependent upon the physiological action in testing for, or in making comparative experiments with this drug, and we are not yet in a position to say how far manipulation in the preparation of the alkaloid may affect its composition.

Aloes.—Aloin does not represent the entire activity of the drug, and its action is so uncertain that it has been omitted in the U.S.P. The precise reason why no crimson colour is developed when true Socotrine aloes is tested with nitric acid is a matter of doubt. It may be due to the oxidation products not yielding either aloetic or chrysammic acid.

Apomorphia.—The aqueous solution readily turns green on being warmed or exposed to the air and light, but the body to which this colouration is due does not appear to have been examined.

Belladonna.—Much has been done to elucidate the chemistry of this plant, yet it cannot be definitely stated at the present time whether or no atropine and hyoscyamine are both present as natural constituents of the plant. A ready means of ascertaining if the hyoscyamine of commerce be that article or atropine or hyoscine is also still desirable.

Cannabis indica is in a particularly chaotic condition. The variety of products and educts derived from this drug is almost as great as in the case of ergot, yet none of them seems to represent the activity of the drug so well as the purified resin. A definite chemical body which can reasonably be claimed to be *the* active principle has yet to be determined.

Curare.—The active principle of this drug has hitherto been obtained only in an impure state. The bark of *Strychnos toxifera*, one of the principal plants from which this body is derived, is undergoing examination at the present time.

Colchicum.—The chemistry of this important drug needs further investigation.

Croton Oil.—The drastic principle of this oil remains to be isolated, and the nature of the vesicating principle has yet to be made out.

Ergot.—The only really satisfactory preparation of ergot at present in use is the fluid extract known as "Bonjean's Ergotine." None of the reputed active principles gives such good results as the crude drug, and though some are fairly definite crystalline bodies, the rapid loss of the ecbolic property seems to point to the fact that the natural combination of the active principle, whilst more stable, is also more active, and the question arises—How far are the naturally associated compounds of the active principles of plants superior to the pure isolated active principles?

Lobelia inflata.—We want to know what relation the emetic principle of this plant bears to the body formerly called the active principle, and which was stated to be a liquid alkaloid.

Lupulus.—Is the narcotic property of this plant resident in the bitter principle? The active principle readily changes, and requires further investigation.

Rhamnus Purshianus and R. frangula.—The exact nature and chemical composition of the purgative principle of both these barks have yet to be decided.

Rhubarb.—The purgative principle or principles cannot be said even yet to be clearly known. Phocoretin with emodin and chrysophanic acid constitute the reputed purgative principles, but in the case of the first-named there is still much uncertainty, and the medicinal properties of the neutral principle and white resin also present in this drug have not been recorded.

Ricinus.—Quite recently a body of an albuminous nature possessing toxic properties and named ricin, has been described; its relations to the purgative principle and the nature of this latter require clearing up.

Taraxacum.—What is the diuretic principle of this plant?

Veratrine. — Commercial veratrine is recognised as a mixture of alkaloids; a more accurate definition than the statement of the solubility of the alkaloids in ether is needed.

Of the active principles of less important drugs, which are practically unknown, the following were mentioned:—That of Indian bael, the acrid principle of mezereon, the bitter principle of myrrh and elemi, of camomile and *Prunus serotina*, of pale catechu, the diuretic and purgative principles of elder, the purgative principle of *Cassia fistula*.

The acids or bodies holding active principles in solution in aqueous menstrua had not been described in the case of parcira brava, cocculus indicus, cusparia, quassia, broom, physostigma, elaterium, colocynth, santonica, arnica, taraxacum, spigelia, capsicum, digitalis, Indian hemp, cascarilla, kousso, pepper, cubebs, serpentary and areca nut.

Questions of biological interest also present themselves. The disappearance of mannite in the olive fruit, in proportion as the oil is formed, requires explanation; it may have to do with the change of carbohydrates into fatty bodies; its investigation would at least be likely to throw some light on this transformation, and so might an inquiry upon the production of wax found on the surface of some fruits, *e.g.*, *Myrica cerifera*.

An explanation of the principle which underlies the change of the acidity of many fruits to sweetness during maturity might be found by investigating the causes which give rise to the loss of acid in lemons when kept.

A knowledge of the nature of the substance in cinnamon bark that hinders for a time the blue colouration of the decoction of iodine, although starch is present, might, if ascertained, prove useful in the micro-chemical investigation of drugs.

The paper was brought to a conclusion by an enumeration of plants requiring further elucidation at the hands of the systematic botanist, the author remarking that it may appear unreasonable to direct attention to materia medica problems that can only be solved in distant lands, but so many young men educated as pharmaceutical chemists now find a temporary home in foreign countries that opportunities for direct or indirect investigation occur far more frequently than would be thought possible.

Personalities.

Mr. J. McClellan has disposed of his business in Park Road, Liverpool, to Mr. John Alexander, of Waterloo, near Liverpool.

Mr. John Harrison, of Sunderland, member of the Pharmaceutical Council, has been appointed a magistrate for the borough.

Mr. W. K. Inglis, chemist and druggist, of Delph, has been elected one of the Guardians of the Poor for the township of Saddleworth.

Mr. T. C. Jones (Jones & Hanbury), chemist, 8 South Street, Manchester Square, W., has been re-elected a member of the St. Marylebone Board of Guardians for Portman Square Ward.

Mr. Thomas Christy, F.L.S., has been recruiting his health on the shores of the Mediterranean as a guest of Mr. Thomas Hanbury, whose gardens at La Martola, Ventimiglia are world-famous.

Mr. G. S. Insull, chemist and druggist, Hanley, has been re-elected one of the churchwardens for the ensuing year for the parish of Wellington. This is the seventh year Mr. Insull has filled the position. Mr. Tirrell, chemist and druggist, of the same place, has been re-elected sidesman.

Mr. Coaker, chemist and druggist, of Jagersfontein, in the Diamond Fields of South Africa, has recently opened a branch shop at Koffyfontein, a new diamond mining camp in the Orange Free State. The *Diamond Fields Advertiser* of Kimberley says this must not be regarded as a sign that those who pin their faith on the result of diamond-digging operations in that part are "feeling sick"; it is rather an indication that trade thereabouts is being firmly established.

Mr. Thomas Hanbury, F.L.S., the owner of the beautiful Palazzo Orengo, with its Jardin d'Acclimatations situated between Mentone and Ventimiglia, has made an offer to the Italian Government to build for them at Genoa a "botanical institute" at a cost of 100,000f. (4,000*l.*), provided the Government will furnish it. The Government having accepted Mr. Hanbury's offer, Professor Otto Penzig, the director of the garden, has been deputed to visit the various botanical institutions of Europe, so that everything shall be arranged on the most approved principles. It is proposed to call this new building "L'Institut Botanico Hanbury." The inauguration is to take place in 1892, on the occasion of the Botanical International Congress that is to be held during the festival at that date in honour of the fourth centenary of the discovery of America by Christopher Columbus. This is not the first occasion of Mr. Hanbury's generosity for the advancement of education. He has built a school-house, with residence for the teachers, in a charming spot, where the children of three villages—viz., La Mortola, Ciotti, and Gremaldi—are educated at his expense; and he is now about to provide for the wants of the numerous population of the lovely valley of Latte by the erection of another school capable of containing 120 children.

Legal Reports.

The Sale of Paregoric Substitute.

We published last week the report of a case tried at the Rotherham Police Court, when a grocer was fined 5*l.* and costs for the sale of paregoric substitute containing no opium. Other cases have since been tried, and are reported below. The varying decisions of the benches in these almost identical cases are little short of a disgrace. Surely the prosecutors ought to know enough of what is going on, especially in their own counties, so that the cases might be represented, and perhaps decided, with uniformity.

At the Otley Police Court on April 18, James E. Yeadon, manager of the Rawden Co-operative Stores at Yeadon, was summoned at the instance of Superintendent Harrison for selling paregoric which was not of the nature, substance, and quality demanded by the purchaser. On March 19 Superintendent Harrison and a police-constable visited the defendant's shop and asked for 4 oz. of paregoric, which the defendant supplied. Mr. Allen, the public analyst, found this to be totally destitute of opium, and only contained one-half of the proportion of benzoic acid ordered by the British Pharmacopœia to be employed in its preparation, and these deficiencies, Mr. Allen said, would greatly reduce its medicinal value. The sample was also deficient in alcoholic strength. Mr. Neill, for the defence, said there was no such medicinal term as paregoric; it was simply a name used by chemists, and he held that shopkeepers had just the same right to use it as chemists. The article sold by the defendant was labelled "Camphor mixture; known as paregoric, free from opium." Opium was a deadly drug, but the complaint of the analyst seemed to be that the public did not get sufficient of it in the article which they purchased as paregoric from shopkeepers, and that the sample was deficient in alcohol, another thing which it was considered should not be given. The word "paregoric" meant a soother, and anything which had a soothing effect might be called by that name, as had been held in a case decided at Sheffield. Under the Pharmacy Act grocers were not allowed to sell poisons, and, that being so, Superintendent Harrison knew what he would get from the shopkeeper—viz., a paregoric free from opium. Under these circumstances he submitted that there had been no sale prejudicial to the purchaser, which, according to the Act, must be the case before a conviction could be obtained. The bench dismissed the case, and also a summons against John Birkett, of Otley, for a like offence. There was a third case against William Brooksbank, of Ilkley, but this was withdrawn.

At Pontefract on Saturday, April 19, William Waites, grocer, Ackworth, was charged under the Food and Drugs Act with having sold as paregoric a mixture containing no opium. Defendant who had supplied the liquor to Superintendent Whincup from a bottle labelled "Paregoric without opium," repudiated any intention to defraud, as he had sold the stuff merely as a soothing mixture and not as containing opium. The bench held that as paregoric must necessarily contain opium, they must convict defendant, though they thought the case would be met by payment of costs.—On April 21, at Wakefield, Alathea Holdsworth, grocer and postmistress, Stanley, and Henry P. Newsone, grocer, &c., Rothwell, were charged with having sold paregoric not of the nature demanded by the purchaser. Mrs. Holdsworth was fined 10*s.* and 17*s.* 4*d.* costs, and Newsone 10*s.* and 18*s.* 5*d.* costs.—At the West Riding Police-court, Dewsbury, on April 21, Henry Dixon, Birkenshaw, and Thomas Brown, Birstall, were summoned for the same offence. The Bench acquitted Brown of any intent to defraud, and fined him 1*s.* and costs. Mr. Dixon had sold a mixture called "paregoric elixir," which was free from opium. It was urged in defence that the mixture was purposely made without opium, because many parents objected to the use of that drug. A fine of 1*s.* and costs was imposed in this instance, the magistrates, on application, refusing to state a case.

Godfrey Woodhead, general dealer, Slaithwaite, Yorks, was charged on April 22, at the instance of Superintendent Pickard, for selling paregoric not of the nature, substance, and quality demanded. Sergeant Forest gave evidence as to purchasing 3 oz. of paregoric from the shop of the defendant on March 7. He informed the defendant who he was, and what the mixture was intended for. According to the certificate of the county analyst, the mixture was lacking in opium, and thereby its medical value was greatly diminished. The defence was that the mixture sold was a purely harmless concoction, not containing opium. Had it contained opium, the defendant would have been liable under the Drugs Act. The label on the bottle containing the mixture in the defendant's shop stated "without opium." It was further contended that there was no such medical term as "paregoric"; it was simply a name used by dealers, and a case dismissed at Otley on Friday last was quoted as being on all-fours with the present one. The Bench considered the case proved, but, believing that the defendant had acted innocently, they imposed a fine of 20*s.* and costs.

On April 22, James Hillier, grocer, Hillsbrough, was also summoned for selling 2 oz. of paregoric not of the substance and quality demanded by the purchaser. Acting upon the instructions of Superintendent Midgley, Police-constable Taylor went to Hillsbrough on March 5, and sent a boy into the defendant's shop to purchase 2 oz. of paregoric. The drug was supplied to him by the defendant's wife from a bottle which bore the words, "paregoric substitute." It was subsequently sent to Mr. Allen, analyst, whose certificate was that it was wholly destitute of opium, and was also deficient in benzoic acid, the proportion present being only three-quarters of a grain in each ounce instead of 2 grains per ounce. In answer to the Bench, Mr. Neal, for the defendant, stated that the cost of paregoric substitute was about the same as paregoric. The Bench inflicted a fine, including costs, of 1*l.* 3*s.*

Important Point under the Sale of Food and Drugs Act.

At the North Riding Police Court, Pickering, on 21st inst., an innkeeper, named James Tuyrrell, of that town, was summoned under the Sale of Food and Drugs Act for selling gin adulterated with water to a greater extent than that allowed by law. Police-constable William Wilson went to the defendant's house by order of Superintendent Spence, and bought a pint of gin. The superintendent followed immediately into the house, said the gin was for him, and that it was for analysis. The analyst stated that his results showed 26 parts in 100 of added water beyond the 35 per cent. allowed by law. Mr. W. H. Pearson, for the defence, raised the objection that the summons was not taken out by the person who caused the analysis to be made, Superintendent Spence having said the gin was bought for him, and he having sent it for analysis, whereas the summons was taken out in the name of the constable who first went in to ask for the gin. He quoted the Act and produced cases in support of his contention, and the magistrates, having consulted with their clerk, held the objection to be fatal, and dismissed the case.

Chemically-coloured Sugar.

A novel and interesting point under the Sale of Food and Drugs Act was raised before Mr. De Rutzen at the Marylebone Police Court on Wednesday. A grocer named Rutherford, carrying on business in St. James's Street, W., was summoned by the inspector under the Act for selling sugar adulterated by some colouring matter not of the nature of sugar. The sugar was bought in the ordinary way by the inspector and subjected to analysis by two public analysts, Messrs. Wynter Blyth and C. E. Cassall. Both agreed in saying that the sugar was coloured with tropæolin or methyl orange, or some other chemical dye. They could not absolutely say that it was deleterious, although some chemicals of the same class were so. The sugar had been tested with hydrochloric acid, and it had turned red, which pure Demerara sugar would not do. For the defence Mr. B. E. R. Newlands, a scientific chemist, said he had made the refining of sugar a particular study for many years. Sugars were imported in an impure state, and the refiner had to remove that impurity. In the process of refining the colour was partly removed, and it had to be replaced artificially. The colouring matter was not methyl orange nor anything of that class. It was a trade secret and he would not state it

publicly; but he would communicate it privately to the magistrate, if desired. The colouring matter was absolutely harmless; he had tried experiments with it upon small animals and upon himself. Mr. Phineas Cowan, Alderman of the City of London and member of the firm of Cowan & Sons, said that he supplied the sugar in question, and he took the responsibility of it. All sugars were necessarily coloured, and except for that colouring matter, which was only in the proportion of 1 in 48,000, the sugar which his firm supplied was the purest in the market, and realised the highest prices. The magistrate dismissed the summons on the ground that the colouring matter was not introduced for the purpose of giving the sugar a fictitious market value.

Adulteration of Yeast.

A case of some importance under the Sale of Food and Drugs Act has just been decided at the East Riding Petty Sessions. Joseph Griffiths, the manager of the Riccall Co-operative Stores, was charged with selling 8 oz. of yeast which was adulterated with 25 per cent. of farina. Under cross-examination, Mr. Baynes, the analyst, admitted that a case was decided in that court on December 27, 1879, in which he had certified the yeast to contain 35 per cent. of farina, but the magistrates did not consider it to be "adulterated." There was a case now pending in Driffield, in which he had certified that the sample contained 30 per cent. of farina. They were waiting the decision in the present case. He maintained that only the minority of samples of yeast contained farina. He did not think that it was necessary to mix farina with German yeast in order to make it keep. He produced samples of Viennese and Danish yeast. They contained no farina, and they had been kept more than three days. They would keep a week in weather like that we were now having. He did not agree with a statement made in The Chemist and Druggist, replying to a correspondent, that German yeast is a mixture of yeast-cells and farina. He could have understood the answer if it had been published before 1860. Several witnesses were called for the defence, and it transpired that the yeast had been supplied by Messrs. King, Hammond & Co., yeast-manufacturers, Derby. It was sold as received from the factory, and it was submitted that yeast was not an article of food; that farina, even if mixed with yeast, was not adulteration, for it was not injurious; that the article sold was not to the prejudice of the customer; and that what was sold as yeast in this case was covered by patent. The magistrates considered their decision in private, and on resuming stated that there were several points of great difficulty, but they were of opinion that there was an infringement of the law, and they inflicted a fine of 2*s.* 6*d.* and the costs. They agreed to state a case for a superior court.

BANKRUPTCY REPORTS.

Re Ewen Macdonald, 84 High Street, Cheltenham, Chemist.

The above debtor appeared for his public examination at the Cheltenham Bankruptcy Court last Thursday, before Mr. Registrar Gale. The debtor's statement of affairs showed unsecured liabilities amounting to 161*l.* 18*s.* 8*d.*, and the assets were returned at 202*l*

In reply to the Official Receiver, the debtor stated he commenced business about ten years ago, when he purchased his present shop, paying 225*l.* for the stock, fixtures, and goodwill. He was compelled to live away from the shop, owing to ill-health. A short time ago he disposed of his furniture to meet some judgment summonses He had tried to dispose of the business, but was unsuccessful. He denied that chemists always made a large profit on the drugs they sold. The amount of profit depended upon the quality of the drug, and the demand there was for it, and it sometimes happened, when he made up a prescription, that the ingredients cost more than he could charge for it.

The examination was finally closed.

Re John Henry Heath, 13 Streatly Road, Willesden, Chemists' Traveller.

This bankrupt applied to Mr. Registrar Hazlitt on Thursday last, at the London Bankruptcy Court, for an order of discharge from bankruptcy proceedings instituted by himself in January last. The Official Receiver reported that the accounts showed debts of 781*l.* 17*s*, and no assets. Bankrupt is a registered chemist, now out of business. He commenced to trade in 1867 or 1868, and, as reported in our issue of March 8, page 328, he failed in 1873 with liabilities 3,590*l.* and assets 368*l.* No dividend was then paid. Then he acted as a traveller, failing again in 1877; debts 850*l.*, assets *nil.* The present difficulties are attributed to the expenses having exceeded income for some years past. The offences charged by the Official Receiver were that the bankrupt had contracted debts with a knowledge of insolvency, and without having reasonable expectation of being able to pay them; having on a previous occasion made an arrangement with his creditors; and having also on a previous occasion been adjudged bankrupt. The Registrar called attention to the fact of no discharge having been obtained from the 1873 proceedings. In reference to that failure, the bankrupt contended that he was discharged by the creditors, but that the trustee (since dead) had never taken the necessary proceedings at the Court, or had never handed over the documents to him. The Registrar, continuing, said the case appeared to him to be that of a person who, having run up one set of debts without being able to pay them, incurred others without any possibility of meeting them. People of that sort, who were adventurous enough to go into business and obtain credit from credulous persons, must take warning from this case. The discharge would be suspended for two years. The bankrupt asked permission to state that in 1888, when he obtained a fairly good appointment, he endeavoured to make an arrangement with his creditors to pay the debts in full, if time were allowed him. Three-fourths of the creditors acceded to the terms, but others declined to do so, and somebody wrote complaining to the firm, with a result that he (bankrupt) was dismissed. A first instalment of 2*s.* 6*d.* in the pound had been paid to the friendly creditors, and the payments would have gone on had he not been thrown out of employment. The learned Registrar: Well, that is very much to your credit. Under the circumstances, the order will only be suspended for one year.

Re Elijah Sellen, 71 Goldsmith Road, Peckham, Chemist and Druggist.

A receiving order was made against the estate of the debtor on April 2, and accounts have now been filed showing unsecured debts, 142*l.* 19*s.* 7*d.*, against assets, 17*l.* 18*s.* 8*d.* The bankrupt states that having been for some time an assistant druggist, he purchased, in or about September, 1886, the business of a chemist, at 246 Commercial Road, Peckham, for 64*l.*, which was to be paid by weekly instalments. In August, 1888, he opened a similar business at 71 Furley Street, Peckham. He attributes his failure and deficiency to loss on his trading, owing, he states, to the falling-off of business, to his household and personal expenses, and to depreciation in the value of his stock and effects, as now estimated for realisation. The only books produced consist of three memorandum books, purporting to show his daily receipts and a portion of his disbursements.

Gazette.

PARTNERSHIP DISSOLVED.

Kershaw, W. B., & Birtwistle, C. H., Tottington, Lancashire, chemical manufacturers.

THE BANKRUPTCY ACT, 1883.

Receiving Orders, Public Examinations, Adjudications, Dividends, &c.

Butler, Patrick, 22 Duke Street, Portland Place, physician. Receiving Order rescinded, the debtor having paid his creditors in full the whole amount of their claims.

Dougall, Keir Johnson, Lyddington Manor, Lyddington, Wiltshire, medical man. Adj.

Hose, Richard Adolphus, 2 Finsbury Circus, City, dentist. Ex. at 34 Lincoln's Inn Fields, W.C., May 15.

Lathbury, Thomas Arthur, 36 City Road, surgeon. R. O.—April 16.

Lovell, Francis Otley, 53 Wellington Road, St. John's Wood, surgeon. Ex. at 34 Lincoln's Inn Fields, May 9.

Neale, M. H., East Greenwich, chemist. Ex. May 6, at 1.

Otley, Percy John, Burton-on-Trent, chemist, R. O.—Adj.

Peck, Frederick Arthur, Great Grimsby, Lincolnshire, chemist. R. O. April 15.—Adj.

Powles, W., Old Kent Road and Rosemary Road, Peckham, surgeon. Ex. May 16, at 12.

Sellen, E., Commercial Road, Peckham, chemist. Ex. May 13, at 11.30.

EXTRACT FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act, making any of these arrangements binding upon dissenting creditors.

Giles & Robley, lately of Ridley Court, Great Market, Newcastle-on-Tyne. (Partners: Nicholas Giles, 133 Stone Street, Newcastle-on-Tyne, wholesale druggist and drysalter, and James Crossley Robley, 182 Dilston Road, Newcastle-on-Tyne, commission agent.) The said Nicholas Giles now trades alone, under the style of Nicholas Giles & Co., at Railway Arches, West Pilgrim Street, Newcastle-on-Tyne, and the said James Crossley Robley also trades alone at 25 Pilgrim Street, Newcastle-on-Tyne. Trustee: Thomas Gillespie, Cross House Chambers, Westgate Road, Newcastle-on-Tyne, C.A. Date, April 14; filed, April 18; unsecured liabilities, 428*l.* 7*s.*; estimated net assets, 147*l.* 10*s.*

	£	s.	d.
Browning & Co., London	22	0	5
Crescens Robinson & Co., London	34	4	5
Cleaver & Sons, London	17	19	0
Dunn & Co., London	16	11	0
Dyson & Co., Elland	15	10	6
Gray & Co., Glasgow	23	15	0
Holdsworth, E. & H., London	30	13	1
Lorimer & Co., London	12	17	9
Lawrence & Sons, Hull	11	12	6
Merrikin, W. S., Hull	36	0	0

Welteke, H., & Co., late of Woodland Works, Wick Lane, Bow, and 130 Charles Street, Stepney, E., oil merchants and drysalters. (Partners: Louis Henry Welteke, 111 Morning Lane, Hackney, now of no occupation, and Benjamin Hooper, 128 Tredegar Road, Bow), and another. Trustee: George White (Francis Nicholls, White & Co.), 14 Old Jewry Chambers, E.C. (C.A.) Date, April 9; filed, April 14; unsecured liabilities, 1,894*l.* 13*s.* 2*d.*; estimated net assets, 1,250*l.* Deed of assignment of debtor's estate to trustee, including money realised by a trustee under a previous deed of assignment, dated January 27, 1890, being sufficient to pay a composition of 10*s.* in the pound, the remaining portion of the said estate to be realised and divided rateably among the creditors.

	£
Alsing & Co., London	29
Anderson & Cattley, London	25
Barker, M., London	10
Beard & Son, London	602
Bosch, A., Gebr	123
Bowley & Son, London	14
Bryant & May, London	12
Clay, Samuel, Waltham Cross (rent)	26
Cook, E., & Co., London	48
Coral Chocolate Company, London	10
Crossfield & Sons, Warrington	26
Day & Martin, London	13
Dubowski & Sons, London	30
Gerrish & Co., London	14
Harvey & Nevill, London	25
Heisor, M., London	22
Histed, J. R., London	11
Hogarth & Co., London	15
Hunt, A. & F., London	16
Hunt, C. J., & Co., London	36
Jones, O., London	33
Jones, W., London	29
Keen & Co., London	26
Lillybank Soap Company, Aberdeen	17
Morgan, J., & Son, London	10
Nesile, Henri, London	35
Nixey, W. G., London	18
Oil and Stearine Company (Limited), London	21
Osgerby, W. W., Hull	15
Palmer & Co., London	109
Paton & Charles, London	23
Pearce, Duff & Co., London	31
Price's Patent Candle Company, London	37
Rickett & Sons, London	17
Ripley, R., Liverpool	10
Robins & Houston, Glasgow	11
Simpson & Co., London	18
Spencer, W. E., & Co., London	18
Stapleton & Son, London	10
Star Brush Company, London	30
Tennant, Sons, & Co., London	28
Watson & Sons, Leeds	12
Wheen & Sons, London	20
Wilkie & Soames, Greenwich	20

Wild, Samuel, 4 Cross Heald Street, Beeston Road, and Canning Street, Dewsbury Road, Leeds, drysalter. Trustee: William Hayes, 4 Albion Place, Leeds, accountant. Date, April 18; filed, April 23; unsecured liabilities, 215*l.* 18*s.* 3*d.*; estimated net assets, 123*l.* 4*s.* 7*d.*

	£	s.	d.
Collinson, T., & Sons, Halifax	16	10	
Gaskell, Deacon & Co., Widnes	17	18	0
Grocock, S. T., Leeds	89	7	6
Wild, Mrs. S., Leeds	23	0	0

And eighteen under 10*l.*

MARRIAGE.

[*Notices of Marriages and Deaths are inserted free if sent with proper authentication.*]

SPYVEE—WRIGHT.—On April 8, at St. George's Church, Doncaster, by the Rev. Canon Tebbutt, William Spyvee, chemist, Sleaford, to Mary Ann, eldest daughter of Richard Wright, Doncaster.

DEATHS.

FISHER.—On April 18, at 22 Cecil Street, Carlisle, Mary Rundle Fisher, eldest daughter of the late John Fisher, chemist, Carlisle.

WATSON.—On April 19, at Summerhill Terrace, Newcastle, Mr. Mason Watson, aged 73. For some time Mr. Watson, who was a chemist, was employed in the surgery and dispensing-room of Sir John Fife, Hood Street, Newcastle, as occasional dispenser of medicines and general superintendent. He also practised as a dentist. After leaving Sir J. Fife he commenced business as a chemist in Newgate Street, Newcastle, which he carried on for a number of years, eventually, however, relinquishing it to become the agent of Lieut.-Colonel Fife-Cooksoon, of Whitehill. Up to the time of his death he had successfully carried on business as a land and estate agent at Newcastle. Mr. Watson was a member of the Newcastle Board of Guardians for more than 20 years, and took a great interest in the Newcastle Dispensary.

NEW ZEALAND DEATHS.—The Registrar-General of New Zealand informs *The Chemist and Druggist of Australasia* that during the year 1889 the deaths of the undermentioned chemists were registered in New Zealand, viz.:—Joseph Williams (61), Hokitika; William H. E. Pinching (52), Waiau, Christchurch; Joshua M. Cowell, homœopathic (82), Napier; Jean Aubin (50), Te Awamutu; Robert W. Cuddeford (27), Christchurch; Thomas P. Morgan (34), Auckland; Henry J. C. Edwards (53), Oamaru.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, at any time within one month of the date of this journal, give notice in duplicate, at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications to be addressed to H. Reader Lack, Esq., Comptroller General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "Trade Marks Journal," April 16, 1890.

"DIAMOND STAR LUSTRE"; for anti-corrosives, pigments, and varnish. By R. W. Harrison, 41 Darwen Street, Blackburn. 94,024.

Sketch of equestrian statue in centre of square; also horses with riders, and wording; for organic artificial dyes. By the Badische-Anilin and Soda Fabrik, Ludwigshafen, Germany. 94,819, 94,820, 95,426, 95,427.

Representation of a bear holding shield with monogram, and sketch showing figure of heathen worship; for chemical substances and raw or partly-prepared animal, vegetable, and mineral substances. By the Actien-Gesellschaft für Anilin Fabrikation, Berlin. 95,409, 95,410, 93,964.

"LIVERINA," and signature; for a medicinal mixture for the liver and kidneys, &c. By D. Anthony, Royal Arcade, 39 St. Mary Street, Cardiff. 93,598.

"SUNILLA"; for a medicinal compound. By F. A. Roe, Princess Street, Hanover Square, Manchester. 95,441.

"LIFE BRIGADE," on black label; for patent medicines and all chemical substances for medicine and pharmacy in Class 3. By J. C. Allison, 41 and 42, Thames Street, South Shields. 95,522.

Picture showing cattle and calf in foreground; for an infant's and invalid's food. By H. C. Glanville & E. C. Glanville, trading as Liebig's Peptic Food Company, 60 Queen Street, Ramsgate. 93,828.

"GO-A-HEAD"; for condensed milk. By the Anglo-Scandinavian Condensed Milk Company (Limited), 6 Victoria Warehouses, Mansell Street, London. 93,984.

"OLDMORE"; for a mineral-water beverage. By A. C. Farrington, trading as The Norfolk Spa Company, Shelfanger, Diss, Norfolk. 95,256.

"TIPPLETON"; for a mineral-water beverage. By A. C Farrington, trading as The Norfolk Spa Company, Shelfanger, Diss, Norfolk. 95,257.

"FRED ANDERTON"; for aërated waters. By F. Anderton, Market Place, Skipton. 95,316.

Sketch of a beaver; for mineral and aërated waters. By W. Forbes and J. Hindes, trading as Walter Forbes & Co., Beaver Bank, Edinburgh. 95,419.

"PYRO-PHOSPHATE," and wording; for a non-alcoholic mineral water. By Reid & Donald, George Street, Perth. 95,440.

"SEMIRAMIS CREME EGYPTIENNE," and Egyptian representations on tablet, and wording; for a toilet ointment. By P. J. Duff, 2 Albert Terrace, Mayflower Road, Clapham, London. 92,416.

"TRITON"; for perfumery, toilet articles, &c. By T. & H. Somerby, Canal Soap Works, London, S.E. 92,252.

From the "Trade Marks Journal," April 22, 1890.

"VEGETABLE EMBROCATION," and picture of stable-yard with horses, figures, &c.; for an embrocation for cattle. By Martin & Martins, Great Charles Street, Birmingham. 95,070.

"GELL'S OINTMENT"; for an ointment for sheep, cattle, &c. By B. Hirst and J. A. Hirst, trading as Hirst, Brooke & Hirst, Aire Street, Leeds. 95,674.

"LUCILLINE"; for petroleum products prepared for use in medicine and pharmacy. By Bosshardt & Wilson, 31 Snow Hill, London. 95,692.

"THORAXICUM," with figure bearing wreath and trumpet, and wording on oval label; for a cure for coughs, &c. By Wm. Smee, 34 Tavistock Crescent, Westbourne Park, London, W. 94,949.

"BIOSSOS"; for goods in Class 3. By Edwin Earnshaw, 8 South Street, Finsbury, London. 95,157.

"EMUCALYPTUS OIL," and other wording; for essential oil prepared for use in medicine and pharmacy. By F. H. Faulding & Co., 132 Fenchurch Street, London, E.C. 95,473.

"OXRA"; for chemical substances prepared for use in medicine and pharmacy. By J. F. Smith & Co., Garbutt Street, Stockton-on-Tees. 95,694.

"TINWORTH OINTMENT," and picture of child on circular label; for an ointment for human use. By Samuel Hill, 93 Gower Street, Bedford Square, W.C. 95,629.

"PERSEVERANDO," and representation of a horse on circular design; for raw or partially prepared vegetable, animal, and mineral substances. By I. J. Weinberg, trading as Moore & Weinberg, Dundee, Forfarshire, N.B. 95,114.

"CITRÒS," and pyramidal design, with signature; for a drink flavouring. By Wm. Duckworth, trading as Duckworth & Company, 93 Corporation Street, Manchester. 93,665.

"TOPHAMALL"; for food or ingredients in food. By G. J. Kenvyn, trading as J. Kenvyn & Co., Newport, Mon. 94,700.

"SYMINGTON'S PYRAMID MALT EXTRACT"; for malt extract, and a malt extract with cod-liver oil. By Thos. Symington & Co., Beaverbank Works, Edinburgh. 95,311.

"DOOGLLA"; for food, or ingredients in food. By C. M. Luxmoore, 529 Battersea Park Road, London. 95,461.

"CHAMPION," and warrior with drawn sword on pedestal; for mineral and aërated waters. By Wm. Coutts, 62 Queen Street, Aberdeen. 94,534.

Fancy design with globe in centre; for mineral waters By T. Fenwick, 21 Devonshire Street, Monkwearmouth. 95,169.

"FIZADE"; for aërated waters. By Wm. Bell, 21 Dundee Terrace, Edinburgh. 95,384.

"T. TENNANT," as signature; for natural and artificial mineral and aërated waters. By T. M. Tennant, trading as T. Tennant, Milburn, Inverness. 95,633.

"CEDAR OF LEBANON," and picture of a cedar tree; for scent-sachets. By C. Davidson & Sons (Limited), 119 Queen Victoria Street, London. 92,762.

"MYRTLE," and floral spray; for perfumery and toilet articles. By Goodwin Bros., Ordsall Lane Soap Works, Manchester. 93,745.

NEW COMPANIES.

AMERICAN AND ENGLISH ARTIFICIAL TEETH SUPPLY COMPANY (LIMITED).—Capital, 1000*l.*, in 1*l.* shares. Formed to acquire the business of R. & J Sivers, of 3 College Green, Gloucester, dentists.

SALT REGAL.—A new company has been formed to take over the business and liabilities of the Salt Regal Company (Limited), Liverpool, which was incorporated in March, 1889, with a capital of 36,000*l.*, in 1*l.* shares. Its latest return (July 20, 1889) showed the full number of shares taken up by 38 members, and that 5*s.* per share had been called up on 24,000 shares, there having been 6,000*l.* received, and there being then 12,000 shares agreed to be considered as paid up. The new company is formed with a capital of 150,000*l.*, in 1*l.* shares.

THE ROBOTTOM BORACIC ACID SYNDICATE has been organised to carry on the business of miners, refiners, and manufacturers of boracic acid, borate of lime, and chemical or other preparations, adopting therefor a contract expressed to be made with Arthur Robottom, 3 St. Alban's Villas, Highgate Road, London, the particulars of which are not specified in the memorandum of association. Capital, 5,000*l.*, in 20*l.* shares, of which 100 are founders' shares. Registered April 14, without special articles.

The following applications for Patents have been registered at the Patent office.

Acid Derivative (New).—4,382.—March 20, 1890.—B. Willcox. New derivatives of phenyl-amido-acetic acid. (Farbenfabriken vormals Friedrich Bayer & Co., Germany.)

Aërated-water Apparatus.—4,216.—March 18, 1890.—H. Tipping.——4,541.—March 22, 1890.—C. G. Matthews. Improvements in the manufacture or preparation of aërated beverages.

Aërated Water.—4,524.—March 22, 1890.—J. Crampton. An improved aërated beverage.

Apparatus.—4,939.—March 29, 1890.—Beyer Frères. Machinery or apparatus for crushing and blocking or moulding toilet soap.——4,959.—March 29, 1890.—C. Kellner. Boilers for the manufacture of sulphide cellulose and in the method of heating the same.

Bandages.—3,537.—March 5, 1890.—M. Salberg. Menstrual bandage.

Bottle-stoppers.—4,026.—March 14, 1890.—H. O. Bucholz. Improvements in stoppers for bottles containing aërated or other effervescing liquids.

Chlorine.—5,488.—April 11, 1890.—W. Donald.

Dental Appliances.—3,762.—March 10, 1890.—G. Cooksey. An improved substitute for sheet wax, principally intended for dentists' use.

Filters.—2,785.—February 21, 1890.—G. E. Bradley.——4,005.—March 14, 1890.—H. Yeomans. A continuous mechanical filter for chemical or other purposes.——4,607.—March 25, 1890.—W. E. Crane. Process of filtering oil.——5,377.—April 8, 1890.—F. Breyer. Asbestos filters.——5,495.—April 11, 1890.—C. E. Gittins.

Furniture Polish.—4,321.—March 19, 1890.—A. McMillan.

Hydrate of Magnesia.—4,759.—March 26, 1890.—H. Precht.

Inhaler.—2,751.—February 20, 1890.—C. J. Clarke.—An improved inhaler for use in bronchial affection generally.——4,445.—March 21, 1890.—J. J. Hartnett.

Injectors.—3,535.—March 5, 1890.—F. J. Borland, R. R. Wood, and W. Carter.

Insecticide.—5,438.—April 10, 1890.—J. Wheeler. Antiseptic deodorant and germicide, particularly for preventing the ravages of moths, book worms, and other insects.

Lotion.—5,214.—April 3, 1890.—J. C. Dyson. For curing rheumatism, lumbago, headache, and other ailments.

Medical Compound.—2,753.—February 20, 1890.—M. Woodward. For ringworm.

Medicinal Preparations.—3,366.—March 3, 1890.—F. P. Depresseux. Compound for the cure of rheumatism.——3,445.—March 4, 1890.—J. Wilks. Medical compound specially applicable for the treatment of hemorrhoids.

Nursing Requisites.—4,553.—March 24, 1890.—W. S. T. Martin. Feeding cups for invalids.

Pill-coating Machinery.—3,429.—March 4, 1890.—F. C. J. Bird. Improvements in machinery for coating pills.

Potash.—4,519.—March 22, 1890.—H. Precht. Process for the production of potash from potassium and magnesium carbonate.

Scientific Instruments.—4,802.—March 27, 1890.—G. C. Topp. Improvements in hydrometers, saccharometers, and lactometers.

Soap.—4,809.—March 27, 1890.—J. Y. Johnson.

Soda.—4,394.—March 20, 1890.—F. Ricard. Manufacture of soda by the ammonia process.

Soft Soap.—3,503.—March 5, 1890.—M. Williams.

Spray-producer.—3,652.—March 7, 1890.—S. H. Stoll.——5,164.—April 3, 1890.—W. Hargreaves. For perfuming, disinfecting, and the like.

Surgical Appliances.—3,521.—March 5, 1890.—J. Arnold. Surgical and other appliances for supporting, depressing, and protecting the human breast or breasts.——4,248.—March 18, 1890.—F. B. Jessett. Portable surgical operating-tables.

Syringes.—3,520.—March 5, 1890.—J. Arnold. Syringes for surgical and other purposes.

Toilet Articles.—3,452.—March 4, 1890.—H. H. Lake. Rolls of paper for toilet and other purposes.

Trusses.—5,370.—April 8, 1890.—H. A. Flenss and W. J. Watts.

Specifications recently published.

1889.

1,027. Thompson (Harding). Remedial agents for catarrh, &c. 6*d.*
1,071. Cowley. Antiseptic pad. 4*d.*
1,691. Holden and Brooke. Injectors. 1*s.* 1*d.*
2,537. Shilton. Disinfectant. 4*d.*
3,707 Tichborne & Ors. Collecting, &c., carbonic acid. 8*d.*
4,539. Eisenmann and Arche. Picric acid. 4*d.*
4,963 Baur. Substitute for musk. 4*d.*
5,225. Dormer. Chlorine. 6*d.*
5,341. Gabet. Potassic and sodic hydrates, &c. 6*d.*
5,594 Murrell. Aërated beverages. 8*d.*
5,703. Kirkman. "Nitre-cake." 4*d.*
5,785. Johnson (Nachfolger). Oxymethoxybenzoic acids. 6*d.*
5,807. Arnold. Trusses, &c. 4*d.*
6,222. Cheavin. Filters, &c. 6*d.*
6,411. Hille. Disinfectants. 6*d.*
6,434. Imray (Farbwerke *v.* Meister Lucins & Bruning). Colouring matters. 6*d.*
7,609. Berkefield. Cleansing filters. 8*d.*
6,777. Bedford. Colouring matters. 6*d.*
7,716. Hime and Noad. Cupr-ammonia. 4*d.*
7,718. Lipscombe. Filters. 6*d.*
7,724. Brown. Bark mills. 7*d.*
7,741. Hart. Hydrogen and carbonic oxide gases. 8*d.*
7,913. Hindley & McKenzie. Cement. 4*d.*
8,193. Webber. Labels. 4*d.*
8,264. Lake (*Wirth & Co*). Colouring matters. 4*d.*
8,527. Black & Rennoldson. Disinfectants. 4*d.*
10,238. Holzapfel (Noll). Beverages containing carbonic acid. 6*d.*
11,173. Phillips. Cocoa compounds. 6*d.*
12,419. Hebblewaite. Flesh-brush. 6*d.*
12,560. Pitt (*Cassella & Co.*). Colouring matters. 4*d.*
13,509. Beston. Restoring hair. 4*d.*
15,964. Coward. Infant's feeding-bottle. 6*d.*
16,673 Saunders & others. Adhesive solution. 4*d.*
16,711. Augé. Soda alum. 6*d.*
19,309. Moody & Streatfeild. Disinfectants. 4*d.*
19,638. Hannan. Toilet paper. 4*d.*
19,862. Hyatt. Filters. 11*d.*
19,940. Dixon. Water filters. 6*d.*
20,093. Hicks. Therapeutic magnets. 6*d.*
20,845. McEwen. Syruping aërated-water beverages. 6*d.*

1890.

364. Lake (Ellebye). Sanitary bandage. 6*d.*
648. Knight. Filters. 6*d.*
2,235. Lake (*Rose & anr.*). Feeding bottles. 6*d.*
1,553. Holmes. Feeding-bottle holder. 6*d.*

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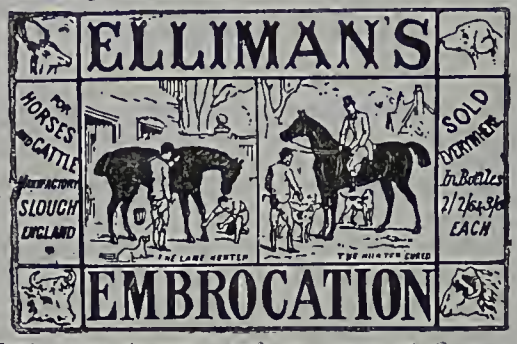

See First Page, facing inside of front of Cover, in the first issue of the month for latest particulars.

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EDITORIAL NOTES.

THE BUDGET.

THE proposals of the Chancellor of the Exchequer seem likely to be adopted by the House of Commons this year in their integrity. No doubt the Budget has met with general favour, and it may perhaps be fairly said to have deserved its popularity. It is certainly difficult to trace any thread of definite principle running through it. The concession to Greece in the matter of currants has the look of "fair-tradeism"; but free trade seems to be in the ascendant in the abolition of the gold and silver plate duties. The attempt to benefit a great many people has given a degree of dissatisfaction to all, but something of this kind may be said about every modification of taxation.

Chemists and druggists were expecting no particular favour, and they have got none. It is likely, indeed, that they will not share in the reduction of taxation in their fair proportion as compared with the population generally.

They will save something on the indentures when they take an apprentice; and this abandonment of the *ad valorem* charge on apprentices' premiums, though a comparative trifle, is one of the best items in the Budget. It will tend to encourage the thorough mastery of trades and handicrafts which perhaps characterised our ancestors more than it does this generation of clerks and general dealers. Income-tax will hit the chemist and all tradesmen as hard as ever, and he will not make up much lee-way out of his savings on tea or currants. If he is an agent for packet tea, he, at least, will not intercept any of the twopence which Mr Goschen rather sanguinely hopes will go to the consumer. Many a chemist will no doubt share in the benefit conferred by the modification of the house-tax, and the reduction of postage charges to Australasia, India, and Africa will be welcomed by everyone; but this and any other advantages

which he might have hoped for from the readjustment of taxation will be pretty well balanced by the extra sixpence per gallon now chargeable on spirit of proof strength, which he will have to pay, and which there is no chance of recovering from his customers.

The additional sixpence imposed on home as well as on imported spirits is to be expressly appropriated towards the relief of local expenditure; it is estimated that it will yield a revenue of 918,000*l.* per annum. Spirit used in medicine would yield only a small, but not by any means an inappreciable, proportion of that amount. There are no statistics, we believe, which would enable us to calculate the relative quantities consumed as medicine and as beverage, but we know that there are several wholesale druggists in London who pay between 5,000*l.* and 10,000*l.* duty on spirit annually. The Imperial tax on spirit of proof strength is 10*s.* per gallon on that produced in the United Kingdom, and 10*s.* 4*d.* on that from other countries. This is a revenue-tax imposed on an article the commercial value of which is about 8*d.* That is to say, the spirit is worth only about 6·7 per cent. of the charge made for it, the duty accounting for the other 93·3 per cent. It does seem something like effrontery to add a surtax to an article so enormously burdened already. And though it is perhaps of no use to protest, it is as well to point out that there is both danger and unfairness in this impost. As we have already hinted, so far as medicinal and perfumed spirits are concerned the tax will have to be paid almost entirely by the retailer; but we are very much afraid the dispenser of alcoholic beverages, to whom it would mean a much more important reduction of his profits, will not readily submit to this consequence. If he will only limit himself to the watering process which the Chancellor of the Exchequer anticipates to a certain extent, no harm will result. But the inspectors under the Sale of Food and Drugs Act will watch him for this delinquency, and the safer course for himself, though the more deadly one for his customers, will be the supply of rawer, cheaper and more unwholesome beverages.

The Customs duties now chargeable on imported spirits are as follow:—

		Old rate £	s.	d.	New rate £	s.	d.
For every gallon computed at proof of spirits of any description as in the said Act mentioned (except perfumed spirits)				4	0	10	10
For every gallon of perfumed spirits		0	16	6	0	17	3
For every gallon of liqueurs, cordials, and other preparations entered so as to be chargeable under the said Act with the duty of 14*s.*			14	0	0	14	8
And so in proportion for any less quantity.							
Chloroform	per lb.	0	3	0	0	3	1
Collodion	per gal.	1	4	0	1	5	0
Ether, acetic	per lb.	0		9	0	1	10
Ether, butyric	per gal.	0	15	0	0	15	8
Ether, sulphuric	,,	1	5		1	6	2
Ethyl, iodide of	,,	0	13	0	0	13	7
Chloral hydrate	per lb.	0	1	3	0	1	4½
And so in proportion for any less quantity.							

The new rates of duty came into operation on the morning immediately following the Chancellor of the Exchequer's statement, and before noon of the same day the London wholesale druggists had generally agreed on the tariff they should adopt for spirituous preparations. Their action has been generally followed by the principal wholesale druggists in the provinces, and the general effect has been that the price of proof tinctures has been advanced 1*d.* per lb.; that of rectified tinctures, liniments, &c., 2*d.* per lb.; concentrated waters containing spirit, spirits of nitre, and sal volatile, 2*d.* per lb.; ether, 2*d.* to 3*d.*; and chloroform, 3*d.* per lb.; rectified spirit, 56 over proof, 9*d.* per gallon. It will be observed that these advances are rather above those actually incurred. Proof-spirit tinctures, for example, will be charged about 9*d.* for the 6*d.* rise, so that chemists get hit rather beyond the Chancellor's intention. But the wholesale druggists fairly say, in reply to a comment of that character, that they make no advance on concentrated infusions and on other preparations of less than proof strength, that there is always a loss of spirit in manufacture, that this loss is *pro rata* increased by the higher duty, and that their prices are subject to a discount which is not allowed by the Government. They do not intend, either, to advance the prices of the concentrated perfumes which they supply.

It will be seen, therefore, from this analysis that if the drug trade applaud the recent Budget as a whole, they do so with perfect disinterestedness: they are the particular class who do not share in the benefits of the surplus.

THE COD-FISHING SEASON.

The cod fisheries rank among the principle industries of Norway; their development is carefully watched over by the Government, and an "Oberinspector" punctiliously tabulates the progress of the fishing, and publishes an official record of the result soon after the close of the season, which, so far as the Lofoten or southern fisheries are concerned, usually ends with Easter. This year's figures, which were published about a week ago, reveal a somewhat remarkable condition of things. In the first place, the season has been an exceptionally good one, much better than its immediate predecessor. It is true that the comparative failure of last year's catch in the south was partly reconped by an unusually favourable fishing further north, in the Finnmarken region; but our present concern is with the Lofoten district only. In these regions, then, 30 million fish were caught in the three months ending April 14, against only 17 millions last year, and 26, 29·7, and 31 millions respectively in the three seasons preceding. But the most peculiar feature of the fishing during recent years has been the great and steady increase in the size of the fish, as shown by the quantity of liver yielded by them. Of course we take it that the liver is not the only portion of the creature which is undergoing this process of aggrandisement, but that the general standard of comfort and consequent physical development among these denizens of the deep is advancing at least as rapidly as that of their human fellow creatures. No other explanation seems admissible, seeing that the average bulk of a cod's liver, which was 0·16 litre in 1885, has progressed by gradual stages to 0·197 litre in 1886, 0·27 litre in 1888, and 0·307 litre in 1890. On the other hand, while they are thus prospering physically, the fish appear to be undergoing a decrease in numbers, for while in the three years from 1885 to 1887 inclusive 87,300,000 were captured, only 73,000,000 were caught in the succeeding three seasons. The total quantity of oil pressed from the livers of the 73 millions was 165,700 barrels, while the 87·3 millions caught from 1885 to 1887 yielded only 124,800 barrels. One important result of the careful investigation of Mr. Oberinspector's statistics is to show the complete fallacy of any conclusions of the prospects of the crop based only upon telegraphic statements of the number of fish caught. During the season such telegrams are frequently sent out, with a view of influencing the market, but it is clear that the only reliable indication of the progress of the fishing is afforded by the quantity of oil pressed from the livers.

Upon further investigation of the statistics, we discover that they afford a striking corroboration of the fact which has been alluded to more than once in our market reports of

late, viz., that the price of medicinal oil has fallen so low that it pays the dealers better to prepare only common oil for manufacturing purposes, such as leather-currying and the like. The common oils are, of course, turned out at much less cost than the "non-freezing" medicinal varieties. The stearin, which is worth comparatively little and forms a considerable proportion of the oil, need not be removed from the manufacturing grades, the use of the expensive refining and refrigerating plant required for steam-refined medicinal oils is also obviated, and, finally, there is a very considerable saving in the cost of packing, as the ordinary oils are shipped in old petroleum barrels, while for the finer grades iron drums and expensive new casks have to be provided. There has been an enormous over-production of medicinal oil for many seasons, and that variety may now be bought for 55*s*. per 24-gallon barrel; while ordinary cod-oil sells freely at 42*s*. per 2-cwt. barrel, and the demand for it is constantly on the increase. The following figures tell a plain tale of the result of this reckless over-production of medicinal oil:—

	1885	1886	1887	1888	1889	1890
Liver obtained, hectolitres	42,600	61,000	47,300	70,200	49,300	92,200
Percentage used for common oil	69	67	60	54	47	64
Percentage used for medicinal oil	31	33	40	46	53	36

It is quite possible that next season's fishing will be a very unsatisfactory one; in fact, after so many successive crops, varying from fairly good to abundant, a reaction is due almost as a matter of course, but even in that case there is probably enough stock of old medicinal oil in the hands of dealers and manufacturers all over the world to prevent any excessive advance in price. On the other hand, if prices should fail to improve, it is practically certain that the percentage of liver used for medicinal-oil making will be even smaller next year than it has been this season, and in that case a period of decided improvement in the article may come within view.

We have mentioned on former occasions that during the present season large quantities of old cod-liver oil have been bought up by soap-makers. In this industry it is quite possible that there would be a prospect of a steady and important outlet for the cheaper grades of cod-liver oil, and at any rate this field would seem to be worth cultivating.

With regard to the Finnmarken fishing on the northernmost shores of the Norwegian coast, the reports are, that up to the present little has been done, although, as a rule, fishing commences there quite early in April, and lasts until the end of May.

PHARMACOLOGY OF THE ROSE.

Rose literature, in prose as well as in verse, is already so abundant that it may be reasonably asked whether the subject offers much opportunity for another writer. In "*Les produits odorants de la Rose*," however, published by Octave Doin, of Paris, Dr. R. Blondel, the eminent French pharmacologist, has been courageous enough to make a new attack on this well-worn theme. And it may be at once admitted that Dr. Blondel has justified his labour. He has evidently made good use of the vast stores of material provided for investigators in almost every department of study by the late Paris Exhibition, and if he has not overwhelmed us with new information, he has at any rate succeeded in collecting into a well-digested form many scattered items of knowledge from a multitude of sources. In the 163 pages of his book there are over 300 references to authorities of all nationalities and ages, including Dioscorides, Ebu-el-Awan, Rimmel, and

The Chemist and Druggist. We admire the precision with which the author tells us in the first place that there are 6,666 varieties of cultivated roses actually known. We then follow him with interest through an elaborate chapter on the different perfumes yielded by these varieties. What, he asks, are the relations which determine the classification of the odours with the botanical classification of the species, under what conditions is the perfume created, and where is its precise location in the plant? To these questions, he tells us, science has never yet been able to formulate an answer, nor does Dr. Blondel venture to fill the hiatus. In an historical review of the rose, commencing with the Zend-Avesta, and meandering with increasing volume through ancient Persia, Greece, and Rome, the author points out the singular circumstance that, until the close of the thirteenth century, no reference is made by any European author of any odorous product obtained by the distillation of rose leaves. At that time a certain Joannes Actuarius, physician to the Grecian court of Constantinople, mentions rose water; but not until about 300 years later, in the beginning of the seventeenth century, was the preparation of otto of rose discovered. With an eye for "new remedies" which seems to have been as characteristic of the old chemists as it is of their latter-day descendants, otto of rose was at once laid by the heels by the apothecaries as a cardiac and stomachic, and in 1762 an enthusiastic chemist went so far as to write that the rose alone was capable of furnishing remedies for the cure of all ills, and that the Pharmacopœia ought to be limited altogether to rose preparations. During the period of the *renaissance* it may be said that rose products in some form were always present in official compound remedies, and in a famous book of pharmaceutical formulæ published in 1499 over 800 preparations, compounded with rose water, otto, or powdered leaves, are enumerated. As late as 1826 the French Codex still numbered ten official varieties of roses. At present, in spite of the fact that otto of rose appears to have gone somewhat out of favour as a perfume in the most fastidious circles, its use in perfumery generally Dr. Blondel thinks to be on the increase, and he points out that, in common with musk, otto of rose possesses the singular property of "fixing" other odours. Whether its use is likely on this account to suffer from recent innovations in the perfumery line is not disclosed.

Dr. Blondel inclines to the belief that the various classes of odours of the rose may be systematised in the same manner as the colouring materials of different varieties of raisins have been classified by Armand Gautier. M. Gautier has shown that every variety of raisin possesses a special tannin resembling a general type, but each having distinct and characteristic reactions, his conclusion being that, in the vine, each variety, in addition to its separate morphological character, possesses a distinct molecular formation—in other words, that each botanical variety has its counterpart in a separate chemical variety. Dr. Blondel also adopts the classification of the scent of the roses in seventeen categories, and proceeds to pass them all under review, concluding with a reference to Darwin in a paragraph on the circumstance that the crossing of two varieties of inodorous roses may frequently result in the growth of a strongly-scented variety.

Reverting to the use and discovery of essential oil of roses, the author states that the knowledge of the distillation of the otto was brought into Europe by the Arabs. As a matter of fact, we believe that there is a distinct tradition in Bulgaria of a Turk who first brought otto into that country from Tunis, and who was the originator of the Bulgarian industry—one of the few things for which we owe any gratitude to the unspeakable Turk. It is generally known that in ancient times Persia and some districts along the southern

coast of the Mediterranean were famous rose-growing countries and every one has heard of the rose gardens of Shiraz and the inspiration which the poet Hafiz drew from them. Dr. Blondel revels in this rich quarry of tradition, and many pages of his book are redolent with ancient Persian and Arab worthies. But there is a reverse to the picture, and it is sad to think that the Shah now imports his otto from Europe, that the famous rose gardens of Shiraz—as Mr. Curzon has recently told the readers of the *Times*—are a howling wilderness—literally so, for while they are infested with hyænas, never a rose is left in them; and that in the Barbary States the rose cultivation has given way to the more profitable, if less elevated, manufacture of geranium oil. In Bulgaria, on the other hand, the cultivation is sensibly extending. For many years it was limited to the vicinity of Kezanlik, then it spread along the whole of the Toundra valley, and now it is stretching tendrils across the Balkans, towards Philippopolis. Fifty years ago Kezanlik produced about 8,000 oz. of otto: now the town and its neighbourhood yield something like 85,000 oz.

Not only does Bulgaria produce increasing quantities of otto, but after the Russian war the industry was transplanted by some emigrating Mussulmans to Asia Minor. Dr. Blondel gives particulars of this fact, and the source whence he obtained this information may perhaps be divined from an innocent translation blunder, where he talks of "les cultures installées en Asie-Mineure, à Bronsse, à Bourges, et à *Elsewhere*." In England, we learn, a large quantity of rose water is also obtained from the cultures in "Mitcham, Branley, Dinbury."

COMMENTARY.

Love's Young Dream.—The following advertisement was published in the *Irish Times* of April 17:—

> Pharmaceutical Chemist Wanted to manage a medical hall in the country, with a view to marrying the daughter of late proprietor; nobody need apply except those whose character will bear the strictest scrutiny. Apply to Wm. Harrington and Son (Limited), Chemists, Cork.

Tom Moore once asked, "Are Erin's sons so good or so cold, As not to be tempted by beauty or gold?" Here is a chance for one section of Erin's sons to get both the beauty and the gold. It would be interesting to hear the finish of that romance. "Lesbia hath a beaming eye, But no one knows for whom it beameth" at present. May it beam on the bravest and the best!

The Testing of Insect-powder.—Dr. H. Thoms, of the laboratory of J. D. Riedel's chemical works in Berlin, contributes to the *Pharmaceutische Zeitung* an interesting note on the falsification of insect-powder. According to the writer the consumption of flower-stalks and so-called "false flowers" for the preparation of insect-powder equals, if it does not exceed, the quantity of genuine flowers employed for that purpose. According to reliable statistics there were sold on the Trieste market, in January last, 84 tons of genuine flowers, 60 tons of stalks, and 22½ tons of so-called "false flowers." The latter are quoted regularly in certain price-lists at about 20*s.* per cwt., and the exportation of "flower-stalks" from the Dalmatian ports is so large that whole shiploads are sent out at the time. It should be added that, according to another authority quoted by the *Pharmaceutische Zeitung*, these stalks are exported from Trieste not so much for the purpose of being ground abroad and mixed with genuine flowers as for the specific use, in the form of a coarse powder, by skin and fur dealers. Some time ago a sample of "false flowers" was identified by the firm of Cæsar & Loretz, wholesale druggists, of Halle-on-the Saale, in Germany, as belonging to *Chrysanthemum leucanthemum*; but Dr. Thoms now refers to a specimen obtained by him from Trieste, which is believed to belong to *Pyrethrum indicum*. The whole flowers of Messrs. Cæsar & Loretz's sample, when tested, were found to leave 8·03 per cent., and the powder yielded 10·106 per cent., of ash, containing a small proportion of manganese. Dried at a temperature of 100° the sample lost 10·85 per cent. of moisture, the total percentage of ash in the debydrated sample being therefore equal to 11·38. Dr. Thoms's *Pyrethrum indicum* flowers, tested in the same way, yielded respectively 9·08 and 9·79 per cent. of manganous ash, and lost 7·76 per cent. of moisture by drying at 100°. It should be added that the flowers were fully developed ones, which yield a smaller percentage of ash than closed flowers. Previous tests of water-free samples of undoubtedly genuine whole flowers of *Chrysanthemum cinerariæfolium* had yielded an average of 6·93 per cent., and ditto powdered flowers of 6·944 per cent. of ash. Dr. Thoms, although admitting that a sample of insect-flowers which leaves over 8 per cent. of ash is suspect, is careful to add that not too much importance should be attached to such a test only. The chemical composition of the ash must also be taken into account, in proof of which he mentions a sample of insect-flowers of splendid appearance, which were offered to his firm by a Trieste house at the rate of only 7*d.* per lb. The water-free samples of these flowers yielded only from 6·84 to 6·94 per cent. of manganous ash, which also showed a slight proportion of chromate of lead. The sample did not possess the characteristic flavour of insect-flowers, and was quite devoid of insect-killing power. Not even all genuine flowers yield an effective powder; in those which have been gathered too early the aroma has not been fully developed, and in flowers which are too old the aromatic principle is lost.

The Position of American Peppermint Oil.—April 1 was "settling day" with the peppermint-growers in the United States, and on that date they had to meet their obligations to bankers and others from whom they had obtained advances. That little business past, a sudden change seems to have come over the cultivators. According to the *Oil, Paint, & Drug Reporter*, from urgent solicitors of offers on their stock they have changed into autocrats who have fixed ideas regarding the value of their property, and have adopted a "take-it-or-leave-it" tone. The effect of this sudden change in the relation of buyers and sellers of peppermint oil has been promptly reflected by the local market, and whereas a week or two ago holders of oil were willing to release stock on about almost any terms the buyers would fix, the latter now find it impossible to buy in any quantity within 10c. per lb. of what holders were anxious to take then. The outlook at the moment is for a steady improvement in the position of peppermint oil, but as this is one of the most uncertain of drugs it would be unsafe to venture the prediction that the present prices will be maintained, and much less safe to hazard the opinion that the upward movement of values will continue.

The "Medical Register" for 1890 has just been published. It contains twenty-two pages more than the one for the year preceding, and in the course of the year many additions and alterations have been made. Thus the actual number on the register at December 31, 1889, was 28,348, as compared with 27,939, the additions having numbered 1,387, and the removals 978, the latter being the largest number since 1886, and has only been exceeded three times during the past fourteen years. We notice that England furnished 657

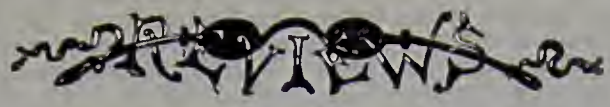
Scotland 444, and Ireland 204 of the additions, while 82 practitioners who had allowed their names to drop off were restored. No less than 407 fell into similar neglect last year, and 564 names were removed on account of death. In addition to the register proper, the volume contains all the Medical Acts, and information regarding the General Medical Council and the registration of medical practitioners. We observe, from the accounts in the volume, that the receipts of the General Medical Council and its branches during 1889 were 13,103*l.* 10*s.*, and the disbursements 11,170*l.* 14*s.* 6*d.* The "Dentists' Register" for 1890 has also been published. There are at present on the register the names of 4,818 persons, 3,700 (or 76·8 per cent.) of whom were registered on their own declaration. There are only 13 foreign dentists on the register. Both volumes are published by Spottiswoode & Co., Gracechurch Street, E.C., and by Mr. W. J. C. Miller, Medical Council Office, 299 Oxford Street, London, W.

The Warner Corner.—The dealings in "Warners" have furnished a good deal of talk, angry and otherwise, in financial circles. During the past week the 10*l.* ordinary shares in the company have been quoted up to 55*l.*, though we cannot say whether any actual sales have taken place at anything like that figure. The approach of a person who may be a seller seems sufficient to cause an immediate drop of 10*l.* or 15*l.* in the value. Only on Wednesday last shares were quoted at noon at 50 to 55; two hours later the figure was 38 to 42. Just how the corner got created is not ours to tell—we simply do not know; but the inside history of the business will be interesting and instructive if it ever should be revealed. Two stories are told, and one of them must be pretty nearly the true one. First, it is said that when H. H. Warner & Co. (Limited) was floated certain speculators on the Stock Exchange, who find it a generally profitable business to wreck new ventures as they come out, sold these shares recklessly; that thereupon other people with faith in the business, and able to control or influence the majority of the holders, bought the shares so offered, and, of course, when the settling day arrived demanded delivery in vain. On the other side, it is said that the Warner syndicate, whoever that may comprise, having the shares pretty much at their control, bought freely on the Stock Exchange from unsuspecting jobbers at rising prices, and now hold before their victims the alternative of a 40*l.* ransom on each share or failure, and consequent expulsion from the Exchange. We do not know that there is any evidence of who the Warner syndicate may be. The company, as a company, say they are not concerned in it, but suspicious people have a notion that Mr. H. H. Warner himself is not uninterested. Mr. George Lewis, it is said, has put on his most powerful spectacles to try and discover a way out for the unfortunate lambs of Throgmorton Street who have found themselves in such a tight place; but the experience is not unprecedented, and escape would be. Settling day comes round again on Monday and Tuesday of next week, and it may be that the knot will then be untied or cut.

Dispensing by Medical Men.—"We want in our profession less dispensing, amongst the upper ranks at least," writes a "Dispensing M.D." to the *Lancet*. It seems to be a question of dignity with this writer, but we hold the same sentiments from expediency, and would not draw a line between the "upper ranks" and the general practitioners. It is a safeguard to the public to have one man to prescribe and an independent one to dispense; it is better for the prescriber that he should be rid entirely of work for which he has no special training and insufficient time to perform properly; and since the State has provided a class of educated dispensers, it seems only natural that the work should fall into their hands. England is peculiar in this matter, practitioners considering that they would not get their fees if they did not give their patients medicine. The same belief used to exist in Scotland, but thirty years ago a kind of unpremeditated union started amongst the majority of the medical men in the large towns; they gave up their dispensaries, took to writing prescriptions, and soon the temporary inconvenience was overcome, and the public now regards the chemist as the proper man to supply the medicine.

Chemists in Textile Research.—One of the prettiest sights which could be seen in the Machinery Hall of the Paris Exhibition was the working of a machine which beat the silkworm by turning cotton into silk, or, rather, a fibre with all the lustre and tenacity of silk. The machine spun a syrupy solution of gun-cotton into delicate threads in a ridiculously simple manner. What has become of the process we know not. Scientific men admired it, but it has often been the fate of inventions of this kind that they bring their originators more credit than money. It is one of the easiest things for the cotton-spinner to produce fabrics which have the appearance of silk, but hitherto such articles have not stood the test of wear. But, if we can credit reports now current, we are somewhat nearer a solution of the difficulty. It is stated that Mr. Nayemura Sakusaburo, a druggist of Hikone, in Omi, has succeeded in converting wild hemp (yachyo), which grows on moors and hillsides, into a substance possessing all the essential qualities of silk, the fibre being strong and glossy, and in no wise inferior to silk when properly prepared. It has been tried in local silk factories, and the manufacturers profess themselves delighted with it; so there is to be a company to work the thing in Kioto, and their factory is to have the euphonious name "Yachyoith Seizo-sho." That hemp and flax are much more durable than cotton is well known. In certain respects linen is superior to silk. One of the most astonishing things about Egyptian mummies, for example, is the excellent condition of the linen bandages in which they are enfolded. A Belgian chemist, in the belief that this state of preservation is due to the linen having been impregnated with a resin, has set himself to discover a process for the preservation of modern flax fabric in the same way, and it is reported that he has found what he wanted in birch tar (oleum rusci), which is used in currying Russian leather. We are told that the tar "yields neither acid nor alkaloid, and that in solution with alcohol it forms a liquid of remarkable fluidity, with the power of resisting, when once dried, even the action of alcohol itself. This substance will, it is said, unite with the most delicate and brilliant colours, and render them imperishable." There is nothing very surprising about this information. Birch tar is well known to be a powerfully antiseptic agent, and the resin referred to is by no means a new discovery. Whether it will keep linen for 1,000 years is another matter, and one which we shall leave to The Chemist and Druggist of 2890 to tell.

Cement for Pestle-handles.—Professor W. A. Viall, of the Department of Pharmacy, Cornell University, informs the *National Druggist* that a good cement for fastening porcelain or wedgewood pestles to wooden handles consists of a stiff paste made by the addition of glycerine to litharge. This should be applied to the wooden handle, and care taken that a close joint is made at the point of union, so that all danger of contaminating substances in the mortar may be avoided.



AND

Literary Notes.

A Practical Treatise on the Manufacture of Vinegar and Acetates, Cider and Fruit Wines; Preservation of Fruits and Vegetables by Canning and Evaporation; Preparation of Fruit-butters, Jellies, Marmalades, Catchups, Pickles, Mustard, &c. Edited by William T. Brannt. 1890. Philadelphia: H. C. Baird & Co.; London: Sampson Low, Marston, Searle & Rivington (Limited). Large 8vo. Pp. xxxii. + 479.

THE comprehensive title of this work is a fair index of the ground which it covers. The manufacture of vinegar and acetates takes up the major part of it, and all the best known processes are described in a very complete manner, drawings and plans of the apparatus employed adding greatly to the value of the text. In other chapters there is, however, a great deal of useful matter, as, for example, in Part II., where we find excellent formulæ for the manufacture of artificial wines, which have cider or other fruit juices as their basis. Formulæ are also to be found in the part on vinegar for most of the aromatic and spiced vinegars which are commonly called for. The chapters on fruits and their preparations are also not without a certain value to chemists, and as the Editor has employed care and intelligence in compiling the work, it is likely to take a place along with the previous volumes of the series ("Fats and Oils" and "Soaps and Candles") as a standard work of reference.

The Journal of the Royal Agricultural Society begins its third series in a handsome way. The first part of vol. i. contains an interesting paper on the foundation of the Society by the Editor, and a number of valuable papers and reports, including "The Food of our Agricultural Crops," by Sir J. B. Lawes, Bart., LL.D, F.R.S.; "Observations and Experiments on some English Pastures," by William Carruthers, F.R.S., P.L.S., consulting botanist to the Society; "Basic Cinder as Manure," by Professor E. Kinch; and a report from the consulting entomologist, Miss Eleanor Ormerod. From the last mentioned we learn that the flour moth is quietly and steadily establishing a footing in this country. One characteristic of the attack of this pest is the manner in which the caterpillars web up the infested flour or meal into felt-like masses. The grubs are rather over half an inch in length when full grown, white to pale flesh colour, and with brown heads. The moths are grey. It is understood that we have imported our supply of these unwelcome visitors from the South European Mediterranean ports. The journal is published by Mr. John Murray at 3*s.* 6*d.* per part.

The Flowering Plant as Illustrating the First Principles of Botany: By J. R. Ainsworth Davis, B A. London: Charles Griffin & Co. Pp. 181.

WE are glad to welcome in this volume something differing from, and something which strikes us as superior in certain respects to, the ordinary elementary text-books on botany. The tendency among teachers of all branches of knowledge to follow almost slavishly on the lines laid down by their predecessors is so frequent that the reviewer is apt to find it difficult to discover the precise public reason, or even a good plausible excuse, for a new treatise. Mr. Davis has, however, worked on a more original method, and our examination of his book convinces us that it is one which is calculated to be of much service in making clear to fresh minds the framework of botanical science. Those who study botany for the pleasure to be derived from its pursuit, and those who have to obtain a certain acquaintance with it, will all find the introduction to its mysteries made smooth by carefully following the scheme laid down in these pages. There is no attempt to shirk the repulsive work of expounding the ugly technical terms which must at some time be learned—indeed, the main object of Mr. Davis's book seems to be to make these intelligible. His pages bristle with them, and at first sight this gives them a rather forbidding aspect. But once mastered the alphabet of the science is acquired, and with it a very considerable amount of familiarity with the morphology and physiology of flowering plants. The method adopted is to treat of the morphology and the physiology of the root, the stem, the leaves, the flower, and the fruit *pari passu*, taking the most easily obtainable garden or field plants as illustrations. It is not possible to understand the book without the specimens indicated, and this fact prevents the possibility of using it for cramming purposes, which its evident condensation of material seems at first sight to suggest.

Browning's Message to His Time: His Religion, Philosophy, and Science. By Edward Berdoe, M.R.C.S.E., L.R.C.P.E. London: Swan, Sonnenschein & Co. Pp. 222.

DR. BERDOE is, we believe, a deserter from the realms of pharmacy to those of medicine; but he is not quite an orthodox follower of the latter science. He is one of the fighting men among the anti-vivisectionists, and he is, besides, one of the leading lights among the worshippers of the late Mr. Robert Browning and his poems. Soon after the death of the poet Dr. Berdoe presented the world with a collection of some of his own essays on Browning's religion and science, several of which had already been read before the little group of people who called themselves the Browning Society. To say that Dr. Berdoe is an appreciative admirer of Browning would be an utterly inadequate way of describing his rapturous enthusiasm over every combination of sentences which that certainly somewhat unmusical genius strung together. Dr. Berdoe's essays are interesting enough to read, but the absolute abandonment of the critical for the devotional faculties which they manifest is calculated rather to encourage scoffers than to win them to more patient study of the works commented on. Dr. Berdoe has discovered that the poet was "intimately acquainted with the physical sciences"; "he knows everything; if we can't understand him, it is because we know so much less than he. He is always right. Often he appears unintelligible." [No one will challenge that statement.] "One ransacks dictionaries and encyclopædias; it is they that are defective, not Browning wanting;" and so forth. Among the many things which Browning knew so perfectly were, it appears, all about the science of chemistry and all about the art of medicine. We take from Dr. Berdoe a specimen of his hero's elegant style of conveying his knowledge. It is quoted from *Pietro*:—

Fair and good are products—of Foul and Evil: one must bring to pass the other.
Just as poisons grow drugs, steal through sundry odd ducts
Doctors name, and ultimately issue safe and changed.
You'd abolish poisons, treat disease with dainties
Such as suit the sound and sane? With all such kickshaws vain you pother!
Arsenic's the stuff puts force into the faint eyes,
Opium sets the brain to rights—by cark and care deranged.

We do not think it difficult to discover Mr. Browning's meaning in these lines; it is not very original, nor very profound; but surely it was never expressed before in such clumsy terms. Dr. Berdoe gushes elsewhere over Browning's analysis of a prescription which he quotes from "Hohensteil Schwangau," and which is not a much better specimen of the art of writing the English language with propriety. It runs thus:—

Ask, now, a doctor for a remedy!
There's his prescription. Bid him point you out
Which of the five or six ingredients saves
The sick man. Such the efficacity?
"Then why not dare and do things in one dose
Simple and pure, all virtue, no alloy
Of the idle drop and powder?" What's his word?
The efficacity, neat, were neutralised;
It wants dispersing and retarding,—nay,
Is put upon its mettle, plays its part
Precisely through such hindrance everywhere:
Finds some mysterious give and take i' the case,
Some gain by opposition, he foregoes
Should he unfetter the medicament.

Dr. Berdoe has shown elsewhere that he is not unacquained with modern therapeutical science, and yet he coolly assures

his readers that the above "is a precise statement of the methods that guide the pharmacologist."

Digests of Criticisms of the United States Pharmacopœia.

We have received the third part of this useful digest which Mr. Hans M. Wilder, under the direction of Dr. C. Rice, is preparing for the Pharmacopœia Revision Committee. Like the former parts, it is a succinct abstract of periodical literature, and on this occasion notes from recently published European Pharmacopœias have been added.

The Year-Book of Photography for 1890 (Piper & Carter, 5 Furnival Street, E.C. 1*s.*) contains 216 pages of literary matter, including many useful notes and formulæ, and communications from specialists.

The British Journal Photographic Almanac, 1890.—A bulky volume edited by Mr. J. Traill Taylor. In addition to information regarding photographic societies and kindred matters, the almanac contains a series of very useful papers by the Editor, Captain Abney, Professor Piazzi Smith, and many other writers whose names are well known in photography. Not the least valuable part of the volume is the Epitome of Progress, under which the Editor discourses very pleasantly on passing events and the work of the past year. Formulæ are also well looked after. The almanac is published in London by H. Greenwood & Co., 2 York Street, Covent Garden, W.C., at 1*s.* and 2*s.*, the latter in cloth.

Everybody's Pocket Cyclopædia is one of the cheapest sixpennyworth's going, and it has gone wonderfully, the sixth edition taking it into the 300th thousand. It is as small and useful a desk companion as we know of, and the fact that pp. 173–204 are devoted to medical matters makes it a necessary book for chemists to have, since the recipes are likely to turn up occasionally. The present edition is much better printed and illustrated than the *Cyclopædia* was at first, and contains 10 maps. It is published by Saxon & Co., 23 Bouverie Street, E.C.

CHINESE GRATITUDE.

On the 3rd of March last, a procession of Chinese marines arrived at the establishment of Messrs. Dakin Brothers of China, Limited, in the Queen's Road, Hong-Kong, after a preliminary parade through the Chinese quarter of the city. They were escorting Captain Liu Kok Cheong, of the gunboat *Anlan*, and Captain Wong Liu Su, of the *Chento*, and these gentlemen were the bearers of two heavy gilt signs with Chinese characters on them, which the firm have since mounted over their doorways. One of them proclaims that "Foreign medicines are infallible," and the other institutes a comparison between the store and the laboratory of a historical Chinese doctor named Hon. They are the honorific gifts of H.E. Admiral Fung Chi Choi, Guardian of the Heir Apparent, Commissioner of Coast Defence, &c., and H.E. Fong Yu, Admiral of the Canton Fleet.

Said Captain Liu, in presenting the first tablet: I have a duty to perform, and I consider it a very pleasing and flattering duty, to be entrusted with the official sentiments of their Excellencies General Fung Chi Choi, Commissioner of Coast Defence, &c., and Admiral Fong Yu, of the Canton Fleet, on the efficacy of your valuable productions. I assure you, gentlemen, we approach you with sincere motives, and trust you will appreciate the honour their Excellencies desire to confer upon your firm, especially when you take into consideration the supposed indifference and opposition by our authorities to the promotion and extension of Western arts and sciences in China. Their Excellencies specially instructed us to make a grand display when tendering to you the accompanying two tablets. The one presented by H.E. the General Fung Chi Choi bears the inscription meaning "Foreign medicines are infallible," and on that given by H.E. the Admiral compares your deeds to the miraculous cures effected by the famous court physician of the Sung Dynasty, Hon Hong. I cannot say more than what is already embodied in the accompanying address tendered on behalf of their Excellencies, which I will ask my friend Mr. James Francis to read for me.

Mr. Francis then read the address, which ran as follows:—

H.I.C.M. Gunboats *Anlan* and *Chento*, Hong-Kong Harbour, March 3, 1890.

To Messrs. Dakin Bros. of China, Limited, Hong-Kong.

Gentlemen,—Under instructions from His Excellency General Fung Chi Choi, the Heir Guardian, Commissioner of Coast Defence of Ham Chan and Lim Chan, between Tong King and Kwang Tung boundaries, and late Admiral of Kwang Shi, and His Excellency Fong Yu, Admiral of the Canton Fleet, we beg to present you with this address. We heartily thank you for the foreign drugs you so kindly sent us. We are happy to find that they can be used with safety by even the most ignorant person without the assistance of a doctor, and can testify to the invaluable aid we have received by use of these simple but efficacious medicines amongst those under our care. We appreciate your benevolent endeavours to consult the requirements of the Chinese community and your efforts to place your valuable medicines within the reach of the poorest of our countrymen. His Excellency General Fung Chi Choi has great faith in foreign drugs. During the late Franco-Chinese War H.E. specially engaged the services of a native expert, Mr. Wong Ngok Ting, now in your employ, for attendance on his troops at Tonquin. Thousands were then saved by the means of foreign drugs carefully administered by Mr. Wong, and during the late expedition to Hainan, under the command of H.E. General Fung Chi Choi, miraculous cures were effected amongst the natives through the same channel. We fully recognise the superiority of European medicines over native drugs, especially for campaigns, and we heartily wish that your efforts for the public welfare will meet with every success and reach all parts of the Chinese Empire. As a token of our gratitude we beg your acceptance of the accompanying two tablets, which we trust you will hang up in your establishment so that all may see how much your humane enterprise is appreciated by the authorities.

With our greetings,

We remain, gentlemen,

Yours very truly,

For and on behalf of His Excellency General Fung Chi Choi, Heir Guardian, &c.

(Signed) Liu Kok Cheong,
Capt. Gunboat *Anlan*.

For and on behalf of His Excellency Admiral Fong Yu.

(Signed) Wong Liu Su,
Capt. Gunboat *Chento*.

Mr. Watts, in reply, said: Capt. Liu Kok Cheong,—On behalf of my firm I beg to offer you, and through your good offices to their Excellencies the General and Admiral, our sincere thanks for the honours just bestowed upon us. I am delighted to find that we have succeeded in winning the good opinions of those eminent personages you represent, and we will strive to do all we can to win the favour of both rulers and the people at large. We accept with gratefulness the two tablets which their Excellencies have been pleased to honour us with. I shall see that they are hung up in the most conspicuous spots in our establishment. We will highly cherish these gifts, seeing that they are the first official recognition we have received since our promotion in China.

The party then adjourned to the refreshment-room, where the health of their Excellencies was proposed by Mr. Watts, Mr. J. D. Kiley proposing that of Messrs. Dakin Bros.

Guarana in Diarrhœa.—Dr. J. Frazer Boughter, late of the U S. army, reports the cure of a case of diarrhœa of two years' standing by means of ordinary doses of guarana given twice a day for a few days, and then once a day. This was after all other remedies had failed.

Coffee, whether good or bad, is considered to be possessed of antiseptic properties. An infusion kills the anthrax bacillus in three hours. The action is attributed to the aromatic constituents.

Trade Notes.

MESSRS. LANGTON, EDDEN, HICKS & CLARK have removed their wholesale druggists' business from Upper Thames Street to larger premises at 38 Wilson Street, and 1 and 2 Whitecross Place, Finsbury, E.C.

MR. VINCENT WOOD, surgical appliance manufacturer, has removed his manufacturing premises to 3 St. Andrew Street, Holborn Circus, E.C. The former premises at 29 Paternoster Square will still be retained as a showroom.

MESSRS. GEORGE STEWART & Co., sealing-wax manufacturers, London and Edinburgh, have obtained the first award for their exhibit of sealing-wax at the New Zealand and South Seas Exhibition, now being held at Dunedin.

MESSRS. A. E. POWELL & Co., of Swindon, announce by advertisement this week that from June 1 the price of their Moonseed Bitters will be advanced 5 per cent.

MESSRS. AYRTON & SAUNDERS, of Liverpool, wholesale druggists' sundries-men, have added to their already extensive premises in Duke Street and Parr Street a large building in Back Colquitt Street, close by their present factory, which they are fitting up with new machinery, and where they hope to be at work by the beginning of June.

MESSRS. GILBERT & HALL, homœopathic chemists, Bournemouth, send us a copy of their "Invalid's Handbook," which is a very useful manual for the sick-room. It extends to 100 pages, most of which are devoted to recipes and hints, in the compilation of which THE CHEMISTS' AND DRUGGISTS' DIARY, amongst other books, has been an aid to the publishers.

MESSRS. ARTHUR S. HILL & SON, of Southwark Street, announce that they are now prepared to supply their old speciality "Dalmahoy's Eau de Mente Pectorale" (established by Dalmahoy in 1755) at reduced prices for export in bond.

MESSRS. BLONDEAU ET CIE. having informed us that in our note on vinolia soap we over-stated the percentage of free fatty matter contained in it, we have examined a sample of the soap purchased by ourselves. This lost 10·1 per cent. of its weight when dried for two hours at 110° C., and the mean of two estimations of the free fatty matter we found to be 4·7 per cent.

AT THE COUNTER.

LADY: "Do you sell wine of 'hark'?" Small Boy: "No; but we keep a dog in the back yard who supplies both, but we don't keep them mixed."

A CHANCE customer entered the shop of a well-known Edinburgh pharmacist a few days ago and wanted a pound of sulphur. Sixpence was the price asked. The customer demurred, and said he got it at a "store" for 4*d*. "Very likely," said the pharmacist; "but I think ye had better gang tae the deevil for your sulphur, and ye'll mayhe get it frae him for naething."

SMALL CUSTOMER: "Dose of medicine for my father who's ill in a bottle."

A CUSTOMER entered a chemist's shop in Birmingham the other day, and asked for a pennyworth of oil of vitriol. When asked what he was going to do with it, said he had been informed that it was good to be dropped into the eyes. It is fortunate the question was asked.

THIS COLUMN is only intended for absolutely veracious reports of events occurring "at the counter." We therefore reject the account sent to us from Penzance of a young lady who asked our correspondent for "a pennyworth of batmosphere boil" when what she wanted was 'air oil.

A. M. G. says he has been asked for "sweet spirits of nature," "sacred magnesia," "clodie o' lime," "St. Peter's balls," and "smiling salts."

ECONOMICAL LADY CUSTOMER: "You remember making up a bottle of medicine for me last week, Mr. Blank, from Dr. X's prescription?" Chemist (with anticipations of a profitable eighteenpenny transaction): "Certainly, madam; we have a copy of the prescription." Lady: "Ah! well, the medicine quite cured me before I had taken half of it. What I called to ask you was whether you could allow me anything for what I have left?" Chemist struggles with his emotion, but has not yet hit on a suitable answer.

EBONY, of Walsall, sends us a collection of Black Country orders. The best are "Tincer of sinner." (Our correspondent is unkind enough to remark that the concentrated essence of this article is often to be found in chemists' shops.) "1 penny suropop papers suropssquls;" "Two ounces of affectionate senna;" the confection was supplied, and to fill an order for "one pennyworth of asaleen," the chemist concluded to "spell it with a we."

AN anonymous correspondent in the Midlands has posted to us a bundle of originals. He addressed the envelope to "The Editor, CHEMIST AND DRUGGIST, 42 Cannon Street, Wolverhampton," but the editor was "not to be found" there. A Birmingham official seems to have had the bright idea to "try London," so that the parcel ultimately reached us. The orders are about as "wide" in orthography as any we have seen. They comprise the following:—"1 penneyworth of licquad and potash;" "Tincergomgoaker;" "ahapucua" [this meant ipecac. lozenges]; "3*d*. of junction root & pertley & Bark" [this in a lady's handwriting]; "Gildockrigme" [a combination of lin. saponis and ol. origan. met the requirement here]; "coalshummy wine;" "Lincture of lecture;" "1 pennyworth of oils of Howgoesit;" "2*d*. Diabetus to swedge milk away;" "1*d*. Gipsey Aculum for roup in fowls;" "1 pennyworth of he suffon 1 pennyworth of she suffon."

THE LADY CHEMIST. (By an Early Victim).—[It appears that in England, as in America, women are now becoming chemists and druggists.]

At bars I often lounged of yore,
  Indulging in flirtation
With Hebes whom I used to bore
  With vapid conversation.

But now to higher spheres I rise,
  For I've discovered lately
A Lady Chemist with blue eyes
  And figure tall and stately.

No "B.'s and S.'s" wet my lip,
  Whose frequent sequel *is* "hic":
For me the alcoholic "nip"
  Has not the charms of physic.

Behind the counter—rampart cold—
  She stands, and with emotion
I take from fingers trim of mould
  The bolus or the potion.

From day to day, come draught, come pill,
  In medicines I wallow;
'Tis hers to mingle drugs with skill,
  And them it's mine to swallow.

As yet her name I do not know,
  So give that name I "canna";
Perhaps, suggest my friends—how low!—
  It's ipecacu-Anna.

I mean to "pop" when words come pat,
  Since Fate may not be fenced with,
And tell the fair Dispenser that
  A "No" were best dispensed with!

Funny Folks.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 Cannon Street, E.C., April 24.

TRADE in the drug and chemical markets remains quiet, and there are not many changes of interest to report this week. The remainder of the drug sales last Friday passed off without any changes of importance, nor were any important alterations in value effected at the cinchona, shellac, spice, and gum auctions held this week. In the department of heavy chemicals, strychnine, oxalic acid, and sal acetos are very firm, and nitrate of silver is rather dearer. Tartaric acid, however, has been drooping, and there is no improvement in cream of tartar. Refined camphor is also rather easier. Sulphate of copper may be had at somewhat less money, and the price of sulphonal has again been reduced. In the drug market we have to record firm prices for cardamoms, gamboge, and ipecacuanha. Jamaica beeswax and spermaceti are much dearer, and the advance in jalap is well maintained. Full prices were also obtained for Shensi rhubarb. Raw camphor is still in an unsettled condition, but we do not think that the spot value would be found quite so high as last week if the market were tested. Saffron, insect flowers, and quillaya are lower, and cascara sagrada is very weak. In the outside markets the changes may briefly be summed up as follows:—Jamaica and Cochin ginger are much higher, and tamarinds rather dearer; shellac is firm, and a shade higher; gambier and benzol rather stiffer. At to-day's gum sales somewhat higher prices were paid for certain grades of East Indian Amrad. Olive oils (common grades) are lower; cottonseed and turpentine are also easier; sulphate of ammonia, caustic soda, soda ash and crystals, and black and white pepper are also all lower.

The Merchandise Marks Act in India.—The following official statements with regard to this Act have been published recently, and will be of interest to firms trading with India:—In the case of goods of continental manufacture which bear no name or trade mark of a maker, dealer, or trader in the United Kingdom or British India, nor any imitation of such name or trade-mark, the description or classification of such goods either on the goods themselves, or on tickets, wrappers, &c., in the English language, or the rendering of the name of the continental manufacturer in English, will be taken as an indication of English origin, and therefore, in the absence of any indication of true origin, as a false trade description under the Indian Merchandise Marks Act. If foreign goods are described in any of the vernacular languages of India, or the name of the continental manufacturer, trader, or dealer is rendered in any of those languages, there must be a corresponding indication of origin in the same language. In fact, such goods will be treated exactly as if they were described in English.

Essential-oil Distilling in Vacuo.—Messrs. Schimmel & Co., the essential-oil distillers, of Leipsic, announce that, after experiments extending over a great many years, they have at last succeeded in obtaining a practical solution of the problem of distilling essential oils *in vacuo* in a manner which renders it possible to utilise the process in the distilling of wholesale quantities. They have constructed a large apparatus in their own workshops, and a few weeks ago commenced working with it. The results obtained thus far are highly satisfactory, and are said to show that the distillation of essential oils *in vacuo* is likely to effect considerable change in the essential-oil industry. By this process the injurious effect of heat on the easily-decomposed essential oils is avoided, and it is claimed that the oils made by the new process are very superior in quality. Messrs. Schimmel & Co. inform us that they have not as yet taken out a patent for their new process, and until that is complete they cannot, of course, give any further particulars of its working. They do not propose to allow other firms to make use of their invention upon payment of a royalty.

Acids.—*Carbolic* remains quiet at the prices last quoted, which appear to deserve attention. *Citric* has been very quiet this week; 1*s.* 3½*d.* to 1*s.* 3¾*d.* per lb. is the quotation. The market for *Tartaric* acid is rather easier; foreign brands may be had at 1*s.* 2¼*d.* to 1*s.* 2½*d.* on the spot, and English at 1*s.* 3*d.* to 1*s.* 3¼*d.* per lb. *Oxalic*: The market must be pronounced rather firmer, although there is no actual change in the quotation yet, but it is not easy to buy at 3½*d.* per lb. *Sal acetos* is quoted at 5*d.*, but we think that 4¾*d.* per lb. would still purchase.

Aloes.—At the continuation of the drug sales on Friday, a further quantity of very common and over-heated to ordinary dark *Curaçaos* sold at from 10*s.* to 20*s.* per cwt. Fine bright *Cape* aloes were bought in at 26*s.* per cwt. nominally.

Ambergris.—About 22 oz. of ordinary black quality sold on Friday last at from 11*s.* to 27*s.* per oz. Fine pale ambergris of good flavour was bought in at 10*l.* per oz. nominally.

Ammonia Salts.—*Carbonate* steady, but unaltered at 3½*d.* per lb. *Sal ammoniac* firm, at 37*s.* for first and 35*s.* for second quality. *Sulphate* dull and easier; London and Beckton terms, 11*l.* 7*s.* 6*d.*; Hull, 11*l.* 5*s.* to 11*l.* 6*s.* 3*d.*; Leith, 11*l.* 5*s.*

Anise.—*Russian* seed is dull and neglected at 18*s.* to 19*s.* per cwt. *Star-anise* is small supply, and very firmly held at 120*s.* per cwt.

Annatto.—Fair to good *seed* from Ceylon sold at 2¾*d.* to 3¼*d.* per lb.

Arsenic firmly held at 14*s.* per cwt. for white powder, landed terms.

Benzols.—Rather firm, and held at 3*s.* 6*d.* to 3*s.* 7*d.* for 90-per-cent., and 2*s.* 8*d.* for 50-per-cent.

Borax.—The manufacturers' price remains at 30*s.*, and second-hand holders are sellers at 28*s.* 6*d.* per cwt.

Buchu.—There have been only small arrivals lately, and we hear of small sales of good green round leaves at 3½*d.* to 3¾*d.* per lb.

Calabar Beans have been selling in Liverpool at 8¼*d.* to 8½*d.* per lb.; 31 bags arrived there yesterday from Africa.

Camphor.—The parcel of seventy-two tubs *Japan* camphor offered at Friday's drug sales, and which showed a rather damp quality, was bought in at 9*l.* 15*s.* per cwt. nominally, but the holder would have been glad to take 190*s.* per cwt. for it. We hear that the parcel is still unsold.

The following statistics give particulars of the exports of camphor from Japan during the last three years:

	U. States	U. Kingdom.	Germany.	France.	Rest of Europe.	Hong-Kong.	Total.
1887 Tons.	1312	405	309	89	473	327	2915
1888 „	607	119	463	64	282	184	1719
1889 „	757	622	633	125	94	203	2487

Camphor (Crude).—The market is exceedingly quiet, and we have not heard of any definite transactions either on the spot or for forward delivery, but it is said that some further sales have been made at 175*s.* per cwt., c.i.f. terms. There have been no arrivals from Japan since our last report.

Camphor (Refined).—The market has been very quiet this week, the English makers still adhering to their price of 2*s.* 8*d.* per lb. for bells, but foreign camphor might be had at 2*s.* 1*d.*, which is lower, and we hear that offers are being solicited at 2*s.* for delivery within six months, but there do not seem to be buyers.

Cardamoms.—A large quantity offered on Friday last, met with a good demand and sold at full prices. *Mysore*, fine bold heavy pale 3*s.* up to 3*s.* 6*d.*; fairly good bright to medium and bold bright at 1*s.* 7*d.* to 2*s.* 11*d.* per lb. *Malabar*, fine bold heavy up to 3*s.* 2*d.*; ordinary small brown 1*s.* to 1*s.* 2*d.* per lb. *Wild Ceylon*, good bold pods were well com-

peted for and brought extreme prices—viz, 1*s.* 8*d.* up to 1*s.* 11*d.* per lb.

CASCARA SAGRADA.—American advices state that the owners of this drug in the producing regions, now that the new season is approaching, are showing more anxiety to sell, but no buyers are in the market at present.

CHAMOMILES.—Quiet, at 39*s.* to 40*s.* for first quality Belgian flowers.

CINCHONA.—The auctions which took place on Tuesday were very heavy, the ten catalogues comprising :—

	Packages		Packages	
Ceylon bark	1,848	of which	1,514	were sold
East Indian bark ..	1,587	"	1,519	"
Java bark	64	"	56	"
West African bark ..	113	"	113	"
South American bark	770	"	151	"
Total	4,382	"	3,353	"

It will be seen that the percentage of Indian bark remains very large—in fact, the supplies from that quarter now constitute a serious factor in the auctions, the more so as the Indian bark is generally richer in alkaloids than that from Ceylon. The assortment shown at the sales was a very satisfactory one, the proportion of *Officinalis* and *Ledger* barks being in excess of the average, both among the Ceylon and the East Indian bark, while ordinary woody and poor *Succirubras* were much less abundantly represented than usual. In several quarters the opinion was expressed that lower prices would rule; but although at first the tone was somewhat undecided, the market remained steady from the beginning, and, with good competition, nearly the whole of the Eastern barks was disposed of at full, and occasionally slightly dearer, prices, the unit being generally placed at 1¾*d.* per lb., although some brokers claim to have realised a unit of 2*d.* per lb. The following are the approximate quantities purchased by the principal buyers :—

	Lbs.
Agents for the Mannheim and Amsterdam works.. ..	212,404
" the American, French, and Italian works ..	155,431
" the Brunswick factory	113,431
" the Frankfort o/M. and Stuttgart works ..	86,319
Messrs. Howards & Sons	74,454
Agents for the Anerbach factory	45,823
Mr. Thomas Whiffen	32,270
Druggists and Speculators	60,847
Total quantity sold	780,989
Bought in or withdrawn	129,332
Total amount of bark catalogued	910,321

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots, and *vice versâ*. An analysis of the catalogues gives the following prices for sound bark :—

CEYLON BARK.—*Original.*—Red varieties : Rather poor to good strong, bright and quilly branch and stem chips, 2*d.* to 3½*d.*, one lot 1½*d.*; fair to good quilly shavings, 2½*d.* to 4½*d.*; stout irregular to fair druggists' quill, 5*d.* to 7*d.*; dusty siftings, 5½*d.*; roots, of which a rather large quantity was offered, 2½*d.* to 4*d.* per lb. Grey varieties: very dusty to fair stem and branch chips, 2*d.* to 4*d.*; fine bold branchy chips, 6½*d.* to 7*d.*; good bright spokeshavings, 5½*d.* to 6½*d.*; root, good strong, 5*d.* to 8*d.* per lb. Yellow varieties, thin branchy twigs, 4½*d.* to 5*d.*; fair to fine strong quilly stem and branch chips, 5½*d.* to 9*d.*; fine bright shavings, 11*d.*; ordinary dull druggists' quill, 6*d.*; root, 8½*d.* per lb. A parcel of Calisaya stem chips sold at 6*d.* per lb. Hybrid chips, 2½*d.* to 3½*d.*; shavings, 6*d.*; root, 2¾*d.* to 5*d.* per lb. *Renewed.*—Red varieties : Low and dusty to fair quilly stem chips, 1¾*d.* to 4½*d.*; fair to fine bold branch chips, 2½*d.* to 6½*d.*; ordinary weak to fine bright shavings, 3*d.* to 8½*d.* Grey varieties: good to strong bold quilly stem and branch chips, 5*d.* to 6½*d.*; one fine rich lot, 8½*d.* per lb.; dust, 3*d.*; good bright to fine rich spokeshavings, 8*d.* to 1*s.* per lb. Yellow branch chips, 5½*d.*; good bold stem chips, 9½*d.* to 10*d.*, and ditto shavings, 10*d.* per lb.

EAST INDIAN BARK.—*Original.*—Red varieties: Ordinary weak and dusty to good bright quilly chips, 1½*d.* to 4*d.* per lb.; chips and shavings, mixed, 4*d.* per lb.; fair to good strong quilly shavings, 3*d.* to 4*d.*; ordinary dull and dusty root, 2*d.* to 3*d.*; thin and irregular druggists' quill, 3*d.* to 4*d.*; small ground dust, 2½*d.* per lb. Grey varieties: Small twigs, 1¾*d.*; fairly good bright shavings, 3*d.* to 4*d.*; small and dull to good bold quilly mixed chips, 3½*d.* to 7*d.*; some fine lots, 7½*d.* to 8*d.*; siftings, 3*d.* to 5*d.*; fair to rich root, 7*d.* to 10*d.* per lb. Yellow varieties : Fair branchy to good strong quilly chips, 5*d.* to 8*d.*; fine bold branchy ditto, 8½*d.* to 9*d.*; fine bright strong shavings, 10*d.* to 10½*d.*; small ditto, 5½*d.* to 6½*d.* Good Calisaya chips, 9*d.* per lb. Hybrid chips, 3*d.* per lb. *Renewed.*—Red varieties: Dull mixed to good bold quilly chips, 3*d.* to 6*d.*; bold bright shavings, 5½*d.* to 7½*d.* per lb. Grey varieties : Fair to good bold chips, 4*d.* to 9½*d.*; several fine lots, 10*d.* to 11*d.* per lb.; fair to good chips and shavings, mixed, 4½*d.* to 9*d.*; irregular druggists' quill, 8*d.*; ordinary to fair spokeshavings, 4½*d.* to 5*d.* per lb. Yellow chips, 6½*d.* Hybrid chips, 5*d.*; ditto shavings, 8*d.* per lb.

JAVA BARK.—Fair *Succirubra* chips, 2½*d.*; short stout to bright bold brown druggists' quill, 6*d.* to 1*s.* 1*d.* per lb.

WEST AFRICAN BARK.—Another somewhat large consignment of the *San Thomé* bark, which has occasionally made its appearance at the sales during the last few years, was shown. It consisted of 13,625 lbs., mostly badly harvested and sea-damaged bark, of a *Calisaya* character. Good bright chips sold at 5*d.*; ordinary thin papery to good even bright quill, at 3½*d.* to 6½*d.* per lb.

SOUTH AMERICAN BARK.—Of cultivated Bolivian *Calisaya* bark, 96 bales were offered, of which 24 bales (about 1,200 lbs.) sold; fair, but rather small and broken, druggists' quill, at 6½*d.* to 7*d.* per lb. Twenty-six serons old hard *Pitayo* bark were bought in. Of 171 packages *Soft Columbian* bark, 50 serons (1883 import) sold at 2*d.* for sound bark, and of 477 packages *Cuprea*, 68 sold at 4½*d.* to 5*d.* per lb., subject to approvals, for good quality.

Our imports from all quarters since our last report have been 1,011 packages.

Since the auctions several parcels that were bought in have been sold at full rates.

CREAM OF TARTAR.—The market has kept fairly steady since last week, and 99*s.* to 100*s.* per cwt. is the price for best white crystals.

CUTCH remains very firm, with sales at 32*s.* 6*d.* for *Star B.* in tablets, 29*s.* 6*d.* for *M.M.*, and 26*s.* for *R.S.* in block.

ERGOT OF RYE.—A parcel of about 20 cwt. good new *Spanish* ergot sold at 1*s.* 3½*d.* per lb., and 4 bags were bought in at 1*s.* 5*d.* per lb. nominally. Ten bags good bold *Russian* sold at 1*s.* 2½*d.* per lb., subject to approval.

GALLS (CHINA).—Lifeless; some small sales are reported of plum-shaped galls on the spot, at 59*s.* per cwt., which would be a good price.

GAMBIER.—The market is firm. Sales of *block* now landing have been made at 27*s.* 3*d*, and forward at 27*s.* 1½*d.* for March-April, 27*s.* for April-May, and 26*s.* 9*d.* per cwt. for May-June.

GAMBOGE.—A very good demand prevailed on Friday, and of the 18 cases then offered, 16 sold at full prices; ordinary rieey block and dull damp pipe at 9*l.* 10*s.* to 9*l.* 15*s.*, slightly drossy and run to good free broken pipe at 11*l.* to 12*l.* 2*s.* 6*d.* per cwt. The principal demand appeared to be for America.

GENTIAN ROOT sells moderately well at 16*s.* per cwt. for fair quality.

GLYCERINE.—Still held at 70*l.* for s.g. 1·260 double distilled by the manufacturers, but there is very little trade at present.

GUM ARABIC.—The auctions held to-day were very heavy, and included, as usual, a very large proportion of East Indian gums, mostly *Amrads* and *Ghatti*. Contrary to the general expectation, the demand was generally good, and prices were rather firmer for some varieties, *Kurrachees* selling at an occasional advance. For *Ghatti* gum the demand was not quite so good, although fine parcels occasionally brought full prices, but the lower grades were frequently cheaper. Good *Amrads* in strong demand at full to higher prices. Glassy *Cape* gums sold cheaply, and scented *Aden* gums were neglected, and somewhat easier. The following prices

were paid for East Indian varieties:—*Bombay-Amrad*, fair red mixed drop, 43*s.*; dark to brown ditto, 32*s.* 6*d.* to 37*s.*; *Kurrachee*, very fine pale selected, 5*l.* 5*s.* to 5*l.* 15*s.*; fair ambery to good pale bright, 51*s.* 6*d.* to 72*s.*; siftings, according to quality, from 17*s.* to 33*s.* 6*d.*; common dark to fine pale dust, 10*s.* to 25*s.*; ordinary black and woody pickings to good red, 7*s.* up to 43*s.* *Bombay-Aden*, slightly scented, but good pale mixed and clean, sold at 36*s.* to 40*s.* 6*d.*; dust and siftings, from 9*s.* 6*d.* up to 26*s.* *Ghatti*, fine bold pale, 72*s.* to 76*s.*; fair to good pale, 36*s.* 6*d.* to 65*s.*; common dark and brown from 19*s.* to 29*s.* Of *Aden* gum, good bold ambery glassy drop, rather scented, brought 59*s.*; ordinary dusty sorts down to 28*s.* Over 100 packages of *Cape* gum were offered, of which a small part sold; fair brown glassy, 17*s.* 6*d.* to 18*s.*; small coarse and drossy to fair drop, 12*s.* to 15*s.*; and pickings from 9*s.* down to 2*s.* per cwt. A large quantity of white *Mogadore* was bought in, good yellow to pale sorts at 6*l.* 5*s.* to 7*l.* 15*s.*, brown and ordinary at 65*s.* to 75*s.* Of dark gum a few packages soft pale grain were bought in at 15*l.* per cwt. Several lots *Australian* sold from 45*s.* to 60*s.* for fair to very fine bold pale frosted red; fair dark red to common coarse siftings, 35*s.* down to 8*s.* 6*d.* Several hundred packages of quite unsaleable *Persian* gum of very fine appearance, white to orange in colour, were all bought in; from 18*s.* to 40*s.* per cwt. is asked for this gum. Some gum from the *West Coast of Africa* sold at 14*s.* for small to hold brown glassy lump, and 7*s.* 6*d.* for common dark. A quantity of gum from *Brazil*, rather resembling Copal, was bought in at 13*s.* per cwt. Thirty-three cases new import from *Manilla*, dark brown block, brought 6*s.* 6*d.* to 7*s.*; pickings, 1*s.* to 2*s.* 6*d.* per cwt. *Senegal gum* is a shade firmer, at 82*s.* 6*d.* to 85*s.* per cwt. for best qualities. Reports from Trieste state that business there in gums is reviving, and prices are firm.

Gum Asafœtida.—The remainder of the parcel in sale has been partly disposed of at 22*s.* to 28*s.* 6*d.* per cwt. for stoney block, mixed with loose almonds. On Friday one good lot brought 29*s.* 6*d.* per cwt.

Gum Benzoin.—Of *Siam* good hard clean reddish block, small to medium almonds, 10 cases were bought in at 18*l.* Fifty-four cases *Sumatra* benzoin sold well at 8*l.* to 8*l.* 5*s.* for good seconds, almondy centres, slightly false packed corners; 7*l.* 7*s.* 6*d.* to 7*l.* 12*s.* 6*d.* for fair seconds, almondy centres, about 20 per cent. dark corners; for another similar lot an offer of 6*l.* 15*s.* was refused. *Penang*, fine brown glassy centres, $\frac{1}{4}$ false packed, sold at 5*l.* 2*s.* 6*d.*, falling to 4*l.* 17*s.* 6*d.* per cwt.; and 24 cases resin from Bombay were bought in at 79*s.* per cwt.

Gum Kino.—Six cases bright grand from Ceylon sold comparatively well at 28*s.* to 29*s.* per cwt.

Gum Olibanum.—Firmly held. At to-day's sales only a few packages, of nearly 600 offered, were disposed of. Medium to fair clean drop, 37*s.* to 40*s.*; siftings, at from 12*s.* to 14*s.* per cwt.; pickings, at from 20*s.* 6*d.* down to 14*s.*

Honey.—Fifteen packages rather dark to good brown liquid *Jamaica* sold on Friday at 30*s.* to 37*s.* per cwt.

Insect Flowers.—Somewhat cheaper for open flowers, at 70*s.* c.i.f.; half-closed are held at 85*s.*, and closed at 100*s.*

Ipecacuanha.—There has been an arrival of 112 packages since our last report. Notwithstanding this the market remains exceedingly firm, and we hear of private sales of 20 to 30 serons at full prices since the auctions.

Jalap.—The American market is described as very firm, and the price equal to 1*s.* 4*d.* per lb. in New York for sound Vera Cruz root. Three bales Vera Cruz, imported in 1883, were bought in at 1*s.* 8*d.* per lb. nominally. The owner suggested 1*s.* 3*d.* per lb. as the price, but there were no buyers.

Kola Nuts.—One bag good red fresh seeds sold at 11*d.* per lb. For a parcel of dried seeds, good sound brown West Indian, an offer of 1*s.* 2*d.* per lb. was refused.

Marshmallow Root.—The spring digging for this drug on the Continent is now at an end, but the result is reported to have been too small to exercise any influence upon the high prices. The stocks of autumn root of good quality in the market centres are small and will scarcely suffice until the new harvest next autumn.

Matico.—A parcel of 25 bales very ordinary dust and stalk was bought in on Friday without mention of price. The owner would have accepted 1*d.* per lb.

Musk.—The market remains dull, and we have not heard of any business since the last sales.

Nux Vomica.—The market is firm. Seven bags rather dark but silky seeds from Bombay sold at 11*s.* per cwt. last Friday. A parcel of 150 packages has arrived since then.

Oils (Essential).—There is not much alteration in the market rates. *Star-anise oil* is being sold at 6*s.* 1*d.* per lb. Of *citronella* 50 cases at 36 bottles were bought in at the auction on Friday at 1*d.* per oz.; the price of good quality is $\frac{3}{4}$*d.* per oz. In American *peppermint oil*, there has been little or no business this week; the quotation for H.G.H. oil is 11*s.* $1\frac{1}{2}$*d.* per lb. *Lemon* and *bergamot oils* are firmly held, but the prices have undergone no further change since our last report. Of *spearmint oil* 4 cases at 12 $1\frac{1}{4}$lb. bottles sold cheaply last Friday at 6*s.* to 6*s.* 3*d.* per lb. From America the price for this oil is reported higher at 9*s.* for H.G.H. and 7*s.* 6*d.* for other brands.

Oil (Olive).—There has been a decided decline in the value of *common* oils during the last few days, and it is difficult to sell anything. Mogadore is offering freely at 35*s.*, Sicilian and Spanish at 39*s.* to 40*s.* per cwt. The prospects for the Italian crop are very good, and the markets in Messina and Naples are lower. *Eating* oils are unaltered in price, with quiet trade, at 4*s.* 6*d.* to 6*s.* per gallon according to quality. No alteration is being looked for just yet.

Oils (Various).—*Cocoanut oil*: The market remains stationary. Ceylon, 25*s.* to 25*s.* 3*d.*; Cochin, 23*s.* 6*d.*; and Mauritius, 26*s.*, all for good quality. *Cottonseed oil*: cheaper, raw, 19*s.* $4\frac{1}{2}$*d.*; refined in ordinary casks from 21*s.* 9*d.* to 22*s.* 3*d.*; Liverpool refined, 22*s.* 3*d.* to 22*s.* 9*d.* *Linseed oil*: quiet at 23*s.* $4\frac{1}{2}$*d.* to 23*s.* 9*d.* *Palm oil*: steady, but quiet at 24*s.* 9*d.* for fine Lagos, and in Liverpool 22*s.* 9*d.* for Lagos, and 21*s.* 9*d.* for Cameroon oil. *Rape oil*: brown quiet, 30*s.* 3*d.* to 33*s.* $4\frac{1}{2}$*d.*; refined, 31*s.* 9*d.* to 32*s.* here, and best refined in Liverpool, 35*s.* 6*d.* to 36*s.* *Petroleum*: firm, American, $5\frac{7}{16}$*d.* to $5\frac{1}{2}$*d.*; Russian, $5\frac{1}{8}$*d.* *Turpentine*: easier, American, 29*s.* to 29*s.* 3*d.* on the spot.

Opium.—A dull and lifeless market. Quotations nominally the same as last week.

Potash Salts.—*Bichromate* is steady at 4*d.* per lb.; *Chlorate* has become flat, and offers pretty freely at $4\frac{7}{8}$*d.* per lb. for prompt delivery. *Yellow prussiate* is worth $9\frac{1}{2}$*d.* per lb.

Quicksilver.—The market is unaltered. The importers quote 9*l.* 10*s.* Second-hand owners sold at 9*l.* 6*s.* to 9*l.* 6*s.* 6*d.*, and at 9*l.* 5*s.* 9*d.* for Italian.

Quillaya.—Holders are rather pressing their supplies for sale, and the market is declining, 14*l.* 10*s.* per ton being now the quotation.

Quinine has been very dull this week. There are buyers of German quinine in bulk at 1*s.* $1\frac{3}{4}$*d.* per oz. on the spot, and we hear that 5,000 oz. have been done to-day at that price, although this morning it was stated there were no sellers at 1*s.* 2*d.* At the drug auctions on Friday 1,000 oz. of water-damaged quinine (Howard's brand), in $\frac{1}{2}$ and $\frac{1}{4}$ oz. bottles, sold, without reserve, at $6\frac{1}{2}$*d.* per oz., net.

Rhubarb.—At the continuation of the drug sales on Friday last, several more parcels of rhubarb were disposed of at very good prices, for *Shensi* root which brought 3*s.* 3*d.* per lb. for medium to bold flat root of fine appearance. An offer of 2*s.* 6*d.* per lb. was refused for bold orange coated round root, somewhat spongy, $\frac{3}{4}$ pinky and $\frac{1}{4}$ dark fracture. Good small druggist's root sold at 1*s.* 10*d.*, bold flat rough coated and rather spongy at 1*s.* 8*d.*, and a parcel of small round pale coated *Shensi*, rather spongy, but fair fracture, at 10*d.* per lb.

Saffron.—Reports from Spain say that prices are about 1*s.* per lb. lower.

Sandalwood.—On Friday last, 98 robbins fair chips sold at from 90*s.* to 110*s.* per cwt.

SENEGA.—Firmly held, and selling at 1*s.* 11*d.* per lb. for good bright quality.

SHELLAC.—At Tuesday's auctions the moderate offerings consisted of

	Cases		Cases	
Orange lac	593	of which	276	were sold
Button „	101	„	9	„
	694		235	

The demand was fairly good. Prices showed an advance on the previous public sales, and were on a par with the highest rates which have since been paid privately, fine pale unworked orange selling at 93*s.* to 94*s.*, good pale second at 79*s.* to 81*s.*, ordinary livery to good red seconds at 73*s.* to 75*s.* per cwt. For a parcel of fine ASSL orange 5*l.* 2*s.* 6*d.* per cwt. was asked. *Button lac* sold at 99*s.* for superior blood lac, and at 77*s.* to 82*s.* for dark to good thirds. Since the auctions the market has been quiet, but firm, and we hear of sales of fine first *Orange*, G in double triangle, at 106*s.* per cwt. At to-day's call the prices were rather firmer, as follows:—

	May	June	July	Aug.	Sept.
Orange TN, sellers	77/	78/	79/	100 at	79/
„ buyers	76/	77/	77/6	78/6	78/6
Garnet AC, sellers	78/	78/	77/	—	—
„ buyers	76/	76/	75/	—	—

After the ring some business was reported in TN at 77*s.* 6*d.* for July, and 78*s.* for September.

SILVER SALTS are higher, in sympathy with the rise in the price of the metal.

SODA SALTS.—*Ash* is rather easier at 1½*d.* to 1⅝*d.* per degree. *Bicarbonate* firmly held at 6*l.* 15*s.* The market for *Caustic* soda has collapsed, and various quotations are current. *Crystals*, with a fairly active trade, rule somewhat easier at 58*s.* 6*d.* to 59*s.* per cwt. *Nitrate* firmly held at 8*l.* to 8*l.* 12*s.* 6*d.* per ton.

SPERMACETI.—Cable reports from America received to-day say that the market is almost bare of stock, and that the manufacturers are offering nothing. The quotation is now 40 cents, or equal to 1*s.* 8*d.* per lb. for refined

SPICES.—At Wednesday's auctions a dull tone generally prevailed for all articles except *Ginger*, which, although in large supply, met with strong competition for both Jamaica and Cochin at a considerable advance. *Arrowroot*: dull of sale; new St. Vincent, 2*d.* to 2¼*d.* *Cassia lignea*: quiet and rather neglected, at 22*s.* per cwt. for whole quill. Several damaged lots have been sold at from 16*s.* up to 20*s.* *Chillies*: steady, at 34*s.* per cwt. for fair old Zanzibar. *Cloves*: privately rather more money has been paid for Zanzibar for forward delivery. At the auctions 414 bales were offered, and all bought in, holders not being willing to meet the market. New Penang sold at 8*d.* to 8⅝*d.* for medium to fair unpicked, and 9¼*d.* to 9⅜*d.* for good bright. Jamaica *Ginger*: 321 barrels of the new crop sold, with good competition, at from 3*s.* to 5*s.* advance on the last sale rates. Common, 69*s.* to 70*s.*; ordinary to medium dull, 79*s.* to 87*s.* 6*d.*; good to fine pale bleached, 91*s.* to 97*s.* 6*d.*; and a few parcels selected, at from 110*s.* to 130*s.*; Cochin ginger also about 2*s.* to 3*s.* dearer for rough and washed, and from 3*s.* to 4*s.* for good cut, the former selling at from 20*s.* to 31*s.* 6*d.*, and cut ginger, small to good bold, at 32*s.* to 69*s.* *Mace* remains dull of sale. *Nutmegs*: in rather small supply, and realising steady prices. *Black pepper*: large sales of more or less dusty Atchin, at 4*d.* to 4⅜*d.*, and of Trang, at 5⅛*d.* to 5¼*d.* *White pepper* also cheaper, with sales of Penang, without reserve, at 6⅞*d.* to 7 1/16*d.*; Singapore, at 9⅜*d.*; and very fine Tellicherry, at 1*s.* 9*d.* to 1*s.* 9½*d.* per lb.

STRYCHNINE.—In strong demand, with a tendency to advance still further; 2*s.* 4*d.* per oz. is the price for quantities.

SULPHONAL.—The manufacturers of this article have again reduced the price. When first introduced the value was about 6*s.* per oz.; now it is about 9½*d.* per oz.

TAMARINDS.—The quality of the new crop, which is now arriving freely, is decidedly superior to last year's. Of the new *Barbadoes* offered at yesterday's sales 55 barrels sold at a dearer price, namely, 19*s.*; old dark *Antigua*, 10*s.*

TEA.—The long-looked-for has at last come, and although speculative spirits on the tea-market were offering 10 to 1 against any alteration in the tea-duty, it will not be long now before the 6*d.* duty is a thing of the past. The immediate result on the tea-market has been an advance of ¼*d.* to ½*d.* per lb. on all tea for price, Congou and Assam alike, and common old Congou that sold at 3⅞*d.* a fortnight ago, realised on Wednesday 4¼*d.* per lb., though the market is unsteady, and tea fully ¼*d.* per lb. better only fetched the same money in sale on Thursday, owing probably to the then uncertainty when the reduction of duty would take effect. Better grades from 5*d.* to 6*d.* are firm, and a large trade has been done in the country; but there has not been a great deal of buying on the market, as most dealers held heavy stocks of Congou under 7*d.*, having been tempted to keep on buying by the splendid value these grades have shown all this year. *Assams* and *Ceylons* share the firmness of Congous, and fair Assam Souchong sells at 7½*d.* to 7¾*d.*, and Ceylon 8*d.*, showing, as in the case of Congous, an advance of ¼*d.* to ½*d.* per lb. We hardly think, however, that it would be desirable for buyers to reckon on this advance being a permanent one.

WAX (BEES') remains in good demand, and prices are decidedly in owners' favour. Good bright yellow to red mixed *Jamaica* was sold on Friday last at 6*l.* 10*s.* to 6*l.* 17*s.* 6*d.*; grey and brown mixed at 5*l.* 12*s.* 6*d.* to 5*l.* 15*s.* For 4 bags good *Mozambique* 5*l.* 5*s.* was paid. Since the auctions as much as 7*l.* 5*s.* has been paid for fine Jamaica; but *Australian* and *Mogadore* gums have not advanced in the same proportion, the latter being still obtainable at 5*l.* 5*s.* per cwt.

CHEMICALS IN THE NORTH OF ENGLAND.

THE chemical market has been very depressed this week, and prices all round are much easier. So far, the usual spring demand is disappointing, and falls far short of what was expected. The lower prices, however, will probably have the desired effect of bringing more orders into the market, and put a stop to its downward course.

BICARBONATE OF SODA continues firm at 6*l.* 5*s.* per ton, in 1-cwt. kegs, f.o.b. Liverpool, with usual allowance for large casks.

BLEACHING POWDER is decidedly weak at 4*l.* 17*s.* 6*d.* to 5*l.* per ton in softwood casks, f.o.r. Widnes or St. Helen's, and 5*l.* 12*s.* 6*d.* to 5*l.* 15*s.* per ton in hardwood casks, f.o.b. Liverpool, 5*l.* 7*s.* 6*d.* per ton in softwood casks, f.o.b. Tyne, and 5*l.* 17*s.* 6*d.* per ton, ex ship Thames.

CAUSTIC SODA.—The market for this article is completely demoralised. Large sales are reported in Lancashire at 9*l.* per ton for 70 per cent., but prices have stiffened, and 9*l.* 7*s.* 6*d.* to 9*l.* 10*s.* per ton is now quoted. 60 per cent. is 8*l.* 7*s.* 6*d.* to 8*l.* 10*s.* per ton, and 74 per cent. 10*l.* 5*s.* to 10*l.* 7*s.* 6*d.* per ton, f.o.b. Liverpool. Newcastle 77 per cent. white, 11*l.* per ton, f.o.b. Tyne.

CHLORATE OF POTASH flat at 4⅞*d.* per lb. for prompt at Liverpool, Glasgow, or Newcastle. Rather higher prices asked for forward delivery.

HYPOSULPHITE OF SODA.—Shipments have been moving off more freely. Prices unchanged at 5*l.* 5*s.* per tin in 5 to 7 cwt. casks, and 5*l.* 15*s.* per ton in 1-cwt. kegs, f.o.b. Tyne; 6*l.* 10*s.* per ton in 1-cwt. kegs, and 6*l.* per ton in 5 to 7 cwt. casks, f.o.r. Manchester or Liverpool.

SODA ASH is easier in price, but demand keeps good. *Carbonated* and *Caustic* quoted 1⅜*d.* to 1½*d.* per degree f.o.b. Liverpool, and 1¼*d.* per degree f.o.b. Tyne.

SODA CRYSTALS in good demand, but prices continue in buyers' favour: 3*l.* 2*s.* 6*d.* to 3*l.* 5*s.* per ton in 3-cwt. barrels, net weight, f.o.b. Liverpool; 2*l.* 11*s.* per ton in casks, gross weight, 2*l.* 11*s.* per ton in 2-cwt. bags, net weight, and 2*l.* 13*s.* 6*d.* per ton in 1-cwt. bags, net weight, f.o.b. Tyne; and 2*l.* 18*s.* per ton in casks, ex ship Thames.

SULPHATE OF COPPER easier, at 24*l.* 15*s.* to 25*l.* per ton Liverpool, for delivery this month, and 24*l.* per ton for May.

SULPHATE OF SODA flat for early delivery, at 25*s.* per ton in bulk on rails at Widnes and St. Helens. Tyneside prices nominal, at 35*s.* per ton in bulk, and 45*s.* per ton ground and packed in casks.

THE GERMAN MARKETS.

HAMBURG, April 22.

DURING the week under review our market, in nearly all its branches, has been exceedingly quiet, and even the one article which of late has been in active speculative request, namely, camphor, has become altogether neglected. The losses caused by unsuccessful operations in this article have kept many of the operators, especially among the small firms, from enterprises into which they otherwise might have entered.

ANTIMONY.—Crude is slowly sinking down in value. On the spot 92m. to 95m., and for delivery from 85m. to 87m. is the nearest value.

BALSAMS.—*Copaiba* is being offered more freely, and reports from New York call it slacker. The tendency of the market has been very quiet, and the recently imported 18 cases of Maracaibo balsam have not been able to find a purchaser at the limit of 5.20m. *Bahia* balsam is already selling as low as 4.90m. *Peruvian*, although firmly held, is only progressing very slowly towards higher values. This week it is unchanged at 8⅜m. to 8½m., with sellers at those prices. It seems as if the chief speculator in the article does not think that the moment for advancing the value has come. *Tolu*: The arrivals lately have been very excessive, and from several quarters old lots are being placed on the market, all of which does not tend to make the price any firmer.

CAMPHOR (REFINED).—Without business, and quiet at the nominal price of 4.40m. to 4.50m. Now that a large part of the so-called speculators, including many persons who did not even know the article by sight, have cleared out, trade has again entered into a quieter and more healthy groove.

COCAINE.—In addition to the old stocks already here, the last South American steamer has brought us a further supply of 20 kilos., for which 450m. are asked.

ERGOT OF RYE remains unaltered, and is offering cheaply—sound quality at 2.55m. to 2.60m.

GUM ELEMI.—The price of Manilla gum keeps up well, and really fine bright quality in small packages can be had from second-hand holders only at 150m.

JALAP.—The stock has become very much reduced. About 100 packages have been scraped together from all parts of the world and placed on the market here, but they will scarcely suffice to cover the demand which is showing itself. Nothing has transpired regarding arrivals of the new crop. First class quality is quiet at 280m.

MENTHOL.—Holders are rather more anxious to sell at 15¾m. to 16m.

OIL (PEPPERMINT).—It is possible to buy Japanese now as low as 7¼m. to 7½m.

ROOTS.—*Calumba*: Quite neglected, and offered cheaply by second-hand holders at 20m. *Rhatania (Payta)*: Depressed in consequence of large arrivals. Best quality, 75m. Of less desirable quality 70 bales have been sold. Small imports of the Curaçao variety are expected. *Sarsaparilla*: Our stock of Mexican Vera Cruz is becoming small, and for good quality 80m. to 85m. is now required.

SABADILLA.—These seeds remain firmly held, and are scarcely obtainable even at the price of 95m. It appears that the small crop, of which mention has been made before, is a fact.

SANTONIN is now only offered by second-hand people. The Hamburg agents of the Russian works of Ivanoff and Sawikoff have had orders by telegraph to keep that brand out of the market altogether.

SPERMACETI.—New York telegrams to-day give the price of the article as high as 3.75m., and, owing to these reports, 3.50m. has already been paid here, while a further advance appears imminent. Our supplies are very small—say about 300 cases.

WAX (JAPAN).—The recent advance in the price of silver has caused this article to look up a little, and it is now obtainable at 85m. to 86m. Speculative interest is again beginning to be shown in it.

THE ESSENTIAL OIL MARKET.

(*From Messrs. Schimmel & Co.'s Report.*)

BERGAMOT OIL.—According to representations which have been received from a well-informed firm in Reggio the exceptionally high prices of this article are not caused simply by a small crop, but also as the result of a combination which has been created among the cultivators and owners of the bergamot plantations. A recently-established local paper has taken the initiative in forming this combination, and on January 5 a public meeting of persons interested in the bergamot-oil trade was held in Reggio, at which a committee was formed for the purpose of arranging a "ring" among the producers. It is not thought likely that these exceptional conditions will be of long duration. The true cause of the fall in the market for bergamot oil has been quite ignored by the participators; the reason is simply that of over-production. Until 1874, when bergamot oil was worth 48f. per kilo., the annual production amounted to about 20,000 kilos. Since that time vineyards, fig-gardens, and mulberry trees have been uprooted to a large extent, and been replaced by bergamot trees, with the result that in the course of fifteen years the productiun of oil has grown five-fold. The proprietors in the neighbourhood of Reggio are quite overlooking the fact that in places on the east coast, and on territories which before 1870 were nothing but grass-land, a large competition has since been created, and that the production from those quarters in regard to quality, as well as to quantity, has quite outgrown that of Reggio.

CAJUPUT OIL.—During the last six months the price of this oil in Macassar has risen from 38 florins per basket of 36 bottles, and this advance has caused the trade in the article to be confined to the very smallest limits. The last mail news from Macassar, dated January 10, announces the sudden collapse of the market, with a reduction in the price to 42 florins per basket; and this will probably have the effect of rendering the owners of the oil in Holland more tractable. So far as Germany is concerned, the article will lose considerably in interest, as it is reported that it will not be made official in the new Pharmacopœia. It has also been eliminated from the new Austrian Pharmacopœia; while, on the other hand, in Holland both the raw and rectified oil remain official.

GALBANUM OIL.—After a prolonged period of bareness of the market a small quantity of genuine galbanum gum has come to hand, and it is thus again possible to execute orders for this rare oil. Galbanum oil is of a pale yellow colour, and possesses the pronounced odour of the gum. Its s. g., at 15° is 0·914; it boils, apparently without decomposing, between 165° and 300°.

GERANIUM OIL.—With regard to the cultivation of geranium in Algiers, the principal district is the department of Algiers itself, especially the hilly country along the coast from Maison-Carrée to Tipoza, known as Sahel d'Alger. This country is noted for its excellent soil, which is specially suited for the cultivation of wine and flowers. There are in the Sahel d'Alger district forty-eight geranium distillers, who together produce 3,000 kilos. of oil per annum. In the department of Constantine the production is considerably smaller, although a slight quantity is exported by way of Philippeville. On the other hand, the industry has not been able to strike root at all in the department of Oran; at any rate, no geranium oil has been exported from there during the last few years. A reliable approximate estimate of the export of geranium oil gives the following figures:—

	Kilos.
From Algiers in 1888	9,076
" " 1889	9,424
" Philippeville in 1888	517
" " 1889	433

These figures include the packing, and should, therefore, be reduced by one-third to find the net weight of the oil. Nothing can yet be said as to the prospects of this year's crop. It is reported that the plantations have recently been increased by about one-fourth, and, therefore, unless something unusual should occur, slightly lower prices may be expected.

LIGNALOES OIL.—The position of this article has considerably changed during the last few months. In consequence of the very low prices which ruled until a short time ago, the manufacture of the oil in Mexico has been abandoned, and the limits at low prices which had been sent to the growers for the autumn crop have simply been ignored. For this reason, the parcels which were in stock in Hamburg and Paris had to be purchased at considerably higher prices, and the limits sent to Mexico had also to be proportionately increased. This alteration in position, coupled with the improved increase in the consumption, will probably lead to the maintenance, if not to an increase, of the present price.

MUSK (ARTIFICIAL).—It is still a matter for doubt whether the artificial musk which has now appeared on the market will have any decided effect upon it, or at any rate will prevent an advance in the price of true musk. It is the opinion of Messrs. Schimmel & Co. that, as with vanilla and vanillin, so in this case also there will be sufficient room for both articles to exist concurrently. Opinions as regards the usefulness of the artificial product have not had time to become sufficiently definite during the short existence of the preparation, and it will be necessary to wait for further experience before giving any judgment; but this is certain, that the perfume of the artificial product is very different from that of fine natural musk, and the claim has not been substantiated that the artificial article goes much further than the other. This does not mean that the artificial musk should be discarded without more ado; on the contrary, it appears to be a product which merits attention; but it may be plainly stated that it does not possess the qualities which are required to supersede or to depreciate genuine musk, and it will scarcely obtain admission into perfumery for the manufacture of fine extracts. On the other hand, at a low price a wide field is open for it in the manufacture of soaps and the more common classes of scents, and for the perfumery trade it will always be of material advantage.

MYRBANE OIL.—Since several months the prices of benzols of a low boiling-point are advancing, and there is, therefore, every reason for a corresponding increase in the price of good qualities of myrbane oil. But unfortunately this increase, however justified, is prevented by the action of the English manufacturers of nitro-toluol, a spurious myrbane oil of disagreeable flavour, which can be sold at a good profit at the rate of 1*s.* per lb. At this moment a decline in prices is not to be thought of. It is true that the raw material—benzol—is a favourite article for speculation and gambling, and sudden alterations in it would be quite within the range of possibility were it not that the favourable position of the textile and colouring industries is also re-acting favourably upon the coal-tar industry. It may be added that the present price of benzol is by no means an abnormal one.

PEPPERMINT OIL (JAPANESE).—In October last the prices averaged about 4*s.* 6*d.* per lb. for mentbol and 3*s.* 9*d.* for undementholised oil. There is now no chance of buying anything under 8*s.* 6*d.* and 5*s.* 6*d.* respectively, and for the future these latter or similar prices will have to be reckoned upon, because not only has the production been considerably decreased, but the consumption in Japan is constantly growing. If this consumption is taken into account, as well as the large export of 1889, of which figures are given below, it may be taken for granted that the whole of the 1889 production, estimated at 90,000 catties, has been altogether absorbed. The exports during the year have been as follows: Dementholised oil, 632 cases; mentbol crystals, 341 cases; undementholised oil, 221 cases; total, 1,194 cases (equal to 32,800 kilos.), against 1,894 cases (about 56,800 kilos.) in 1887, and 876 cases (26,300 kilos.) in 1888. It appears that by far the larger quantity of dementholised oil is sent to London. Hamburg, on the other hand, receives rather more mentbol crystals than London does, and as regards undementholised oil, nearly the whole of the production goes to the German port.

SANDAL-WOOD OIL.—At the Government auctions of sandal-wood held at Mysore in November and December last the following quantities were brought forward:—

	Tons
From the Shimoga district	770
„ „ Kador „	200
„ „ Hassan „	300
„ „ Mysore (Seringapatam and Hunsur) district	1,000
„ „ Bangalore district	150

while the auctions in previous years show the following quantities:—

Year	1883	1884	1885	1886	1887	1888
Tons	2600	2775	2650	2025	2450	2500

The assortment usually consists of 15 per cent. of roots, 20 per cent. of best-quality logs, and the remainder of second-quality logs and chips. Unexpectedly high prices were paid for all qualities, for whereas the values had been, superior 46*s.* 6*d.*, roots 44*s.* 9*d.*, ordinary 40*s.*, c.i.f., the whole of the quantity brought forward sold rapidly at 54*s.* 6*d.* superior, 52*s.* 6*d.* for roots, and 46*s.* 6*d.* for ordinary, an increase of 20 per cent. It is believed that for a long time to come the article will be maintained at high prices, as the Government of Mysore has again taken energetic steps to obtain the full benefit of this monopoly. In future only so much wood is to be cut down as is required for the consumption, and it seems to be the object of the Government gradually to increase the price of the wood, and then to keep it at a definite point. Of the whole of the wood which is sold, about two-thirds is used in India, partly for carving, and partly as an incense in religious ceremonies, and only about one-third is consumed in Europe. If, in spite of this advance in the price of the raw material, the cheap oil from East Indian wood is frequently offered, cause may be found in the use of Macassar sandal-wood oil, which very nearly approaches the Indian oil in quality, although for perfumery purposes the Indian oil deserves decidedly the preference.

YLANG YLANG.—Considerable arrivals have taken place in the finer qualities, which are distilled in October and November, and the distillers of Manilla have at last decided to manufacture larger quantities—of course if the required amount of fresh flowers is available, which is not always the case. For the next few months it is possible that the present prices will still remain unchanged; at any rate, there is no thought of any decline. The distillation has recently been interrupted by violent storms, which have prevented the gathering of the flowers, but it does not seem that any great damage has been caused by this interruption.

A DRUGGIST in New England, who happens to be town clerk also, is placing a premium upon matrimony by offering to give a few marriage certificates and a pint of eau de cologne to every *bonâ-fide* applicant for a marriage certificate during the next two months. This because the number of applications has been unprecedently small recently.

PEPPERMINT-GROWING IN MICHIGAN.—Next to Wayne County, New York, St. Joseph County in Michigan is the largest peppermint-producing locality in the United States. As early as 1846 farmers began to cultivate the plant in this locality, and the industry has continued to grow ever since. By far the principal grower, says the *Pharmaceutical Era*, is Mr. Henry Hall, of Three Rivers, and "Hall's Big Marsh of Florence" is the largest piece of land in America devoted to raising peppermint, containing some 900 acres, of which 400 acres are put into mint each year, and alternated with clover to keep up the strength of the soil. Mr. Hall has four large distilleries, with total capacity of some 500 lbs. of oil daily; the largest still-house is situated in the centre of a 600-acre field; it contains four stills, and is surrounded with mint-fields as far as the eye can see. Two or three crops are gathered from each planting; the first and second crops are the best, and 20 lbs. of oil to the acre is a good yield; the third crop is very apt to be "weedy," and the yield only about 10 lbs. to the acre. The annual output of oil in St. Joseph County is 60,000 to 70,000 lbs. Among the largest growers in the county are Mr. Henry Hall and Mr. H. D. Cushman, of Three Rivers, the latter of whom is also known as the patentee of the menthol inhaler, and Mr. Albert Todd, of Nottawa, who in 1882 started the manufacture of pipmenthol, but did not find it profitable in competition with the Japanese product.

Memoranda for Correspondents.

Always send your proper name and address: we do not publi them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

The Pharmaceutical Council Election.

SIR,—As we have been solicited by a considerable section of the members of the Pharmaceutical Society to offer ourselves as candidates for seats at the Council, we willingly comply with their request, being anxious to forward as much as possible the "interests of the trade," which, we think, have not received that attention which we had a right to expect from our representatives up to the present.

We are fully satisfied that good educational work has been done in the past, and the public, by legislation, have been well protected so far as qualifications of Chemists and Druggists are concerned.

If Chemists and Druggists are to keep open shops, and secure a moderate existence, some remedy must be sought to prevent inexperienced persons or store-keepers usurping the functions of those persons who have been compelled to spend considerable time and money in fitting themselves for the important post of dispensers, &c.

If elected, whilst we desire to uphold all efforts for further educational advancement, we are satisfied that more attention must be paid to the commercial element of the trade or profession. We are, Sir, yours faithfully,

JOHN MORRIS BROAD. JOSEPH MALTBY.
H. N. BOWMAN SPINK. F. THOS. PERCY WELLS.
ALFRED COLEMAN. LEWIS BUTTLE ROSS.
DAVID STORRAR.

P.S.—We are pleased to be able to announce that we have induced Mr. Gwilym Evans to place himself again in nomination for a seat upon the Council, and we trust that the minority he now complains of will soon become a working majority.

[The above letter has been sent to us by Mr. Coleman, of Cardiff. We presume he has authority for using all the names given, though the following letter suggests a little doubt on this point.—ED. *C. & D.*]

SIR,—Having, at the request of a number of my friends in the North, become a candidate for election to the Pharmaceutical Council, I desire now to offer my services to the members of the Society generally as a representative of the retail trade.

I see that my name is included in a list of candidates which has already been circulated amongst the electors; but while appreciating the compliment, and agreeing generally with the policy commended, I should like it to be understood that, if elected, I shall enter the Council as an independent member, tied to no party.

My views upon current pharmaceutical politics are already fairly well known.

I believe that our leaders, although eminently able and honest in intention have, in their policy, kept the professional training and educational requirements of pharmacists more in view than their trade interests, and that the latter have suffered severely in consequence.

This is shown by the fact that the membership of the Society comprises only a minority of the trade. The bulk of those who pass the examinations do not connect themselves with the Society at all, and a large proportion of those who do only keep up the connection for a very few years.

If the policy of the Society truly represented the wishes of the trade, it would certainly command its support. That it does not do this points to some causes, other than apathy and indifference, to account for the thinning of our ranks. The course I would advocate is that the causes referred to should be sought out and investigated, and if possible removed, so as to allow of a closing up of our ranks before taking any further steps in the way of educational or restrictive legislation.

I am in favour of efforts being made to bring limited companies under the scope of the Pharmacy Acts, so as to protect the trade against unfair co-operative trading.

The financial position of the Society also requires careful attention from the new Council. For some years the expenditure has been steadily tending upwards without any corresponding increase in the revenue. It is evident, therefore, that strict economy and reduced expenditure are not only desirable, but absolutely necessary for the welfare of the Society.

In conclusion, I would venture to urge the fact of Scotland having only one representative on the Council at present as a strong argument in my favour. It is quite true that Scotland has no claim to special representation, but it is admittedly desirable that it should be fairly represented. This cannot be done without the help of its friends in the South, and I trust that the required help will not be withheld from me by those whose general views upon pharmaceutical questions I fairly represent.

I am, Sir, yours truly,
Kirkcaldy, N.B., April 22. D. STORRAR.

SIR,—Will you allow me to suggest that the new candidates for the Pharmaceutical Council should state the grounds on which they seek election, the alterations they would (if elected) propose, and enlighten the trade generally on their programme. By so doing, if their views are largely accepted, they would stand a better chance of being elected, and *vice versâ*. Yours respectfully,
Birmingham, April 17. CHARLES J. ARBLASTER.

The Tudor Prescription.

SIR,—The second ingredient in the Tudor prescription is evidently the "Diacaryon Galeni," or "Roob Diakaryi Galeni," prepared as follows:—

Bruise 1 part of unripe walnuts; boil with 2 parts of water for some hours; strain, press, and dissolve in the liquid an equal weight of honey; then evaporate to the consistence of a thick syrup.

The "Diacatholicon" contained nineteen ingredients, the "Confectio Hamech" as many as thirty-one, so that no less than fifty-five items were combined in the prescription.

Yours truly,
MELALEUCA. (33/12.)

SIR,—The prescription of which a facsimile is given at the end of your article on "Pharmacy under the Tudors" is a particularly interesting one, as illustrating what may be called the legitimate practice of the time. All its ingredients have, at one time or another, had a place in our college dispensatories, and some of them are still occasionally asked for. I read the prescription thus; but I do not understand the abbreviation of the last word. This word should apparently be *potio*:—

Diacatholicon	℥ss.
(H)Jera pigra Galeni	ʒss.
Confectio hamech	ʒiij.
Aquæ fumitorii	℥iij.
Absinthii	℥iij.

Fiat potg.

If each of the compounds here prescribed were written in full, the prescription might frighten a nervous patient. The principal ingredients of diacatholicon were cassia pulp, tamarinds, senna, polypody root, violets, rhubarb, aniseeds, liquorice, fennel, and sugar; of confection of hamech, myro-

holans (yellow and black), violets, pulp of colocynth, polypody of the oak, wormwood, thyme, aniseeds, fennel, red roses, fumitory, prunes, raisins, honey, agaric, senna, rhubarb, spithyme, diagrydium (composed of scammony and quince), cinnamon, ginger, and spikenard; of Galen's hiera picra, cinnamon, zedoary, acarum, cardamoms, saffron, cochineal, and aloes. If inclined to smile at the miscellaneous character of this prescription, we should remember that some of those it is our lot to dispense would almost equal it in this respect if written, as the Scotchman swore, "at lairge." The chief difference would be that many of our most potent compound remedies are secret recipes—a point certainly not in our favour. Yours, &c.,

Epworth, April 21. C. C. Bell.

Cutting Chemists as Employers.

Sir,—I beg to differ from your correspondent "S. J. W.," who states in your last issue that cutting chemists are hard masters. My experience is quite the reverse, having worked with two or three. The last I was with for four years—and he is recognised as the cutting chemist of one of our largest towns—I always found to be a gentleman in every sense of the word, paying good salaries and expecting a reasonable amount of work during reasonable hours. My hours were 8.30 A.M. to 8 P.M., and 11 on Saturdays; and, although a chemist, we had no Sunday duty. "S. J. W." must not think that none but "stores" close on Sundays.

I do not myself see any disgrace in "cutting"—in fact, if one wants to prosper, we must both "cut" and assist our employers to "cut"; we must go with the times, and I for one will continue to do my best at "cutting" until such benefactors as "S. J. W." show us in working order something that will pay us to do better than our present system.

All juniors in our employ were always treated with respect and consideration—still, no servant must think he can rule his employer.

I do not doubt that there are black sheep among chemists as well as other tradesmen.

I am, yours faithfully,

April 21. D. H. Oxen, Chemist.

The Casus Belli.

Sir,—With your permission I will reply to the letter of my old friend Mr. Warren in your last issue, first disclaiming, at all events on my own behalf, his assumption that criticism of, or opposition to, the policy of the present Council necessarily springs from disappointed hopes or failure to win the confidence of the public. Nearly twenty years ago I protested—face to face with the Council—that they were morally wrong in pursuing two only of the three objects of the Society, briefly described as trade interests, education, and benevolence. From that assertion of principle I have never departed, and surely Mr. Warren might concede that the President's epithet of "prostitution," applied to the direction of the Society's powers to the first of these objects, justifies an active opposition on the part of those who differ from him.

With much that Mr. Warren says I agree, but all his epithets are not happy. So far from the Pharmacy Bill having reached harbour, it can hardly be said to be on the stocks; nor have we reached the acceptance by the presidential party of the elementary fact that no measure affecting their own interests will be accepted by a body of educated Englishmen without full and free discussion of its bearings.

As to the question of the exact object aimed at by chemists who pass the qualifying examination, I think Mr. Warren will obtain a clearer view of the matter if he will ask himself with what purpose Parliament imposed this necessary qualification. For the public safety is the only possible answer. And, on parallel lines, the passing of certain examinations is required of a licensed pilot, not for his mental improvement, but for the safe navigation of the ship.

The law forbids the captain to take any but a licensed pilot, and, so far, has not allowed a limited liability company to capture the profits by "running" the pilot as their qualified salaried servant.

Mr. Warren's experience of well-to-do provision merchants of twenty years ago must have been an unfortunate one. Two I could mention known to him and to me at that period who are now, if external signs count for aught, better to do than ever. The name of one figures in the list of subscribers to the Benevolent Fund; the other has just set up a brougham—perhaps as the only possible alleviation of his "severely crippled and almost annihilated" condition.

The alternative to the protection of trade interests is declared to be, to impress the public by personal influence and scientific attainment. How the former is compatible with Mr. Warren's anticipated substitution of larger concerns for the single-handed pharmacist is not clear. As to the latter, the public will gladly pay *respect* to advanced science, but will pay nothing else.

Does the esteem accorded to the medical profession, as indubitable as it is well deserved, prevent well-to-do people from trying to make use of medical skill without pecuniary reward? And is it not only by assertion of their rights in this respect that the profession are able to keep the evil in check? If anything can be affirmed with certainty of the present social state, it is that only by combination can any class secure just and fair treatment from the rest of the community; and we who are trying to influence the Council election say that the moral weight, statutory powers, and accumulated funds of the Society should be employed, as occasion serves, to promote equally all three of the objects for which it was founded. Yours obediently,

Market Square, Dover, April 19. J. F. Brown.

The Villain of the Tragedy.

A Chemist (28/38) explains, in a lengthy letter, "why the present state of adversity prevails amongst the members of the trade generally." It is all along of that Pharmaceutical Society. Our correspondent works out his theory with crushing effect, and piles up his proofs—some of them, by the way, incompatible with others—with relentless industry. They (the Society), he declares, "not only give the trade no protection, but their examinations, especially the Minor, are conducted on a most unfair basis." "It is to the examiners' and Society's interests to throw out as many as they can; it is the guineas they want." It might be supposed that this policy of keeping out candidates was adopted in the interests of those that are in; the Society ought to be credited with that, surely. But there is not even this amount of virtue in their policy, it seems; they are merely setting afloat the stores. Whether this is their design or not our correspondent does not make clear. The assistant says, "No matter how well I am up, they will 'chuck' me just the same," and so he starts a company and gets rich. But then there are a certain few who are not "chucked"; why do not they get rich as well as their competitors? Here is the answer, "The reason why they beat us hollow is because, although not chemists in name, they are in every other sense of the word; and then the capital they have to work with is what the average chemist has not." Somehow, therefore, it appears that getting "chucked" is an advantage; apparently it brings capital with it. Then follows an appeal to assistants to "rise like men," strike like bootmakers, and throw off the yoke of slavery, and so get everything put right. Letters of this kind almost persuade us to close our columns to the ventilation of grievances altogether.

Notes and Queries.

Liq. Ammon. Acet.—If I made this by neutralising the acid with liq. ammon. fort, then bringing up to proper bulk with distilled water, would the product differ in any way from the B.P. solution?

Sp. Ammoniæ Aromat. B.P.—This spirit I never pass into stock without estimating. The last lot was exactly B.P. strength as to total ammonia, and gave a very slight precipitate on adding the second portion of the barium chloride solution. Is not the B.P. a little indistinct in this estimation of the carbonate? Other samples have contained more, and some less, than the B.P. total ammonia, and, as too much is considered as much an adulteration as too little, would it not be wiser for the B.P. to allow a reasonable margin for possible evaporation of the ammonia? It seems absurd that prosecutions should take place if the ammonia is within a reasonable limit either above or below B.P. standard.

Aqua Destillata.—Would it not be well for the B.P. to state the amount of ammonia allowable in this water, and fix a standard colour allowable on adding the Nessler reagent? I distil our town water, which does not give any coloration to Nessler, so I have no hesitation in using an automatic tube to fill the kettle from the hot water in the condenser. The water thus distilled gives only a faint yellow coloration to Nessler's reagent. I experimented with a lead worm for the condenser, and got what I expected—lead in the water, which on estimation yielded over one-tenth of a grain per gallon. The worm I work with is made of pure tin.

The Authority of the B.P.—The reports of prosecutions here and there set one thinking that it is quite true that the Pharmacopœia Committee should have among its members some of the leading working pharmacists, and then we should not have such a scope for criticisms on the B.P. I should like to know if anyone ever had cause to add the treacle to make pil. conii co., for instance, and in making pil. rhei co., if the treacle, "about 3 oz.," is the quantity arrived at from practical experience. Yet in the above two instances, if the treacle is not added as directed, the product could not be truly said to be B.P., and would be as open to prosecution as if the active ingredients had been omitted, which is absurd. If the authority of the B.P. is to be held as absolutely the law, a customer going to a grocer for vinegar must be supplied with the B.P. article; the same with sugar, soft soap, paraffin, wax, and other articles commonly sold by grocers. There are other instances I could mention, and it seems to me that the authority of the B.P. possesses a power which, if put into full force, would be as arbitrary, tyrannical, and unjust as it is possible to conceive. In my opinion the power should be put within reasonable limits, namely:—

B.P. preparations to be always supplied when asked for as such.

B.P. preparations, drugs, and chemicals to be always used in dispensing.

The Sale of Food and Drugs Act should be sufficient to prevent adulteration of all commercial articles.

CINNAMON. (30/35.)

[Our correspondent apparently intends these notes for comment by subscribers, but we may say here, regarding the first, that, following the old Edinburgh Pharmacopœia, the British Pharmacopœia of 1884 directed liquor ammoniæ acetatis to be made by mixing solution of ammonia and acetic acid. The solution never became popular. It was devoid of the fresh taste of the solution made from the carbonate, and which is due to carbonic acid gas; great heat was developed in making it, and the colour and odour were suggestive of the gasworks sometimes. The formula seemed to be all right in theory, but it turned out to be bad pharmacy. ED. *C. & D.*]

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Iron and Quinine Mixture.

The mixture referred to by "Incompatible" has frequently been under my hands, and I have always labelled it, "Shake the bottle," from having observed a fairly heavy precipitate on standing. This occurred usually after twelve hours, more or less as the quantities varied. I tried it on seeing the letter, and my clear mixture of Saturday evening was on Sunday filled with the usual (with me) precipitate.

PER ARDUA. (34/27).

34/1. *Dal.*—(1) For the rhubarb and nux-vomica pills use one part of proof spirit, and two of treacle. (2) Add half an ounce of mucilage to the mixture. See "The Art of Dispensing," p. 140. (3) See February 22, 1890, p. 276.

A Question of Incompatibles.

SIR,—I shall be much obliged if some of your readers will tell me how they would act if the following prescription was presented to them—whether they would dispense it as written, or, having regard to the incompatibles, inquire the writer's intention concerning them? I adopted the latter course, and found he intended potassii bromidum, not bicarbonas, to be used:—

Chloral hydrat.	ʒj.
Potass. bicarb.	ʒiss.
Liq. amm. acet.	℥iij.
Aq. camph. ad	℥vj.

Capiat partem sextam tertiis hovis.

Your obedient servant,
VERA SOLIDAQUE. (34/18.)

Exalgine and Terebene.

Exalgine.—Have any readers noticed the formation of a precipitate on adding alcoholic solution of exalgine to chloroform water? Evidently caused by the chloroform, as the solution mixes clear with aq. dest.

Terebene Emulsions.—In making emulsions of terebene and other volatile oils, I have usually used a little pulv. acaciæ, rubbed down the oil and the gum in a dry mortar, and after adding about twice as much water as oil (all at once), a stirring produced a good emulsion, capable of rapid completion. To-day I have had terebene, 1 drachm; pulv. tragac., 12 grs.; aq. ad 3 oz.; which gave me much trouble. Can any reader inform me as to his experiences of p. tragac. and essential-oil emulsions?

PER ARDUA. (34/27.)

A Pill Query.

I had the following prescription to dispense the other day:—

Cupri sulph.	gr. j.
Argent. nit.	gr. ¼
Ext. hæmatox.	gr. ij.
Pulv. ipecac.	gr. j.
Pulv. opii	gr. ½

Ft. pil. tales xij.

The medical practitioner wished a pill not larger than an ordinary 5-grain pill in appearance. Would any of your readers try to make the pill, and report *modus operandi* and appearance after being made?

BARON ZEIGLER. (35/72.)

LEGAL QUERIES.

32/73. *X. Y. Z.*—We cannot say whether a certain title for a perfume has been registered as a trade-mark or not in America. To ascertain this you should instruct your agents to have a "search" made. The search at the Trade Marks Office in London costs 1*s.* per quarter-hour. If the title has been registered there is a *prima facie* case against you, but you can (in England, and perhaps in America) apply by law to have the mark struck off the register. This, however, would involve an expensive lawsuit, and might not be successful. The "Maigloeckchen" (*Convallaria majalis*) are known in English as "lilies of the valley."

34/6. *Oxonian.*—We do not think an unqualified man could be prevented from calling his shop a homœopathic pharmacy. He is liable to a penalty, however, if he sell any scheduled poison the presence of which you can prove. Only the Pharmaceutical Council can proceed against him. You should therefore write to the Secretary.

35/14. *Ariosto.*—Only pharmaceutical chemists are entitled to use the title "pharmaceutist."

35/3. *Lucie.*—We cannot undertake to say what proportion of a poison in a cough-mixture makes it a preparation of a poison in the legal sense, but we should say yours would come within that description. The advertisement undoubtedly renders the compound liable to medicine-stamp duty. We hardly think the label would do so; but you had better ask Somerset House, if you want to be sure.

35/58. *Justice.*—It is quite possible that a conviction might be obtained against the unqualified man who sells chlorodyne lozenges. But no one except the Pharmaceutical Council can take proceedings, and we do not think they would be likely to commence an action in such a case. When you sell chlorodyne lozenges do you label them "poison"? It is only on the ground of their being legally poisons that unregistered men could be prevented from selling them, and yet it is the fact that chemists generally themselves neglect to treat the articles as poisons.

35/56. *K. H.*—The label does not seem to us to render the article liable to stamp duty. See Alpe, p. 92.

35/32. *Fiel.*—A general order (108, 1879) declares that "any article containing chloral-hydrate is liable to duty at the rate of 1*s.* 3*d.* per lb. as 'chloral hydrate,' such as 'sirop de chloral.'"

36/35. *Reform.*—Your name will remain on the Register whether you subscribe to the Pharmaceutical Society or not.

30/43. *A. C. B.*—We know of nothing in the Acts which makes a 2-drachm measure graduated to minims illegal. It must have been verified and stamped, and the statutory charge for this verification advances as the subdivisions become more numerous. But according to Section 45 of the principal Act, a measure properly stamped is *primâ facie* legal.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulæ and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulæ or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

35/53. *Jago.* **Hair Restorers.**—July 13, 1889, page 66 January 4, 1890, pages 13 and 31; April 5, page 482.

35/50. *A. F. G.* **Gelatine Bottle-capping.**—Sept. 28, 1889, page 480.

29/28. *Wales.*—There is a very good formula for **Antifebrin Mixture** in "The Art of Dispensing," page 228, but the brandy may be an objection in cases of headache. The following does not have that objection:—

Antifebrin	ʒj.
Spirit of chloroform	℥ss.
Compound tragacanth powder	ʒj.
Water, to	℥vj.

Reduce the antifebrin to fine powder, shake up with the spirit, and pour into the water and compound tragacanth powder previously mixed. Dose, a tablespoonful.

29/51. *Henry.*—**Test for Peptones.**—Mr. Gerrard's method is very satisfactory. Take a little of the solution under trial, add an equal volume of liq. potassæ, B.P., and a few drops of sulphate of copper solution, 10 per cent. If the solution under trial contains peptone, a red colour, varying in intensity according to the amount present, is produced.

35/55. *Sanitas.*—(1) Tucker's antiseptic is made by J. Tucker & Co., 51 Paddington Street, W.; (2) **Lightfoot's Solution.** See our issue August 31, 1889, page 317.

29/56. *F. C.*—**Nerve Oil** (*Oleum nervinum*).—A German preparation of this name is composed of chamomile oil, 200 parts; oil of caraway, 5 parts; oil of rosemary and oil of thyme, of each 10 parts. The chamomile oil is made by infusing 1 part of the flowers in 10 parts of olive oil.

28/68. *B. H. A.*—The best way of **Keeping Garlic** is in dry silver-sand; but our experience is that it becomes bad under any circumstances. Sometimes suspension in a bag from the ceiling of a room answers very well.

30/70. *C. Mitchell.*—**Mistura Ferri Aperiens, U.C.H.**—

Sulphate of magnesia	60 grs.
Sulphate of iron	4 „
Dilute sulphuric acid	9 minims
Peppermint water, to	1 oz.

Dissolve and mix.

30/37. *C. J.*—A good deal of information respecting the so-called new methods of aërating waters was given in this volume, page 203, February 8. No one has contributed any personal experience.

29/54. *E. M. D.* has two barrels of **Tamarinds**, and wants to know if there is any pleasant beverage he can use them in, or any profitable use he can put them to other than retailing them per lb. Tamarinds make a very pleasant drink when freshly digested in water, but the liquid does not keep very well, and, in order to keep it, it would be advisable to convert into a syrup, such as the following:—

	Oz.
Tamarinds	5
Boiling water	20

Pour the water upon the tamarinds, stir for five minutes, and set aside until cold. Strain through flannel, and dissolve in the liquid, by the aid of heat, 20 oz. of sugar. Improve the colour with liquid cochineal, and flavour with vanilla.

30/34. *E. B.* has some Russian **Turpentine** which has a very offensive odour. How can the latter be removed? Shake each gallon of the spirit with 1 pint of solution of permanganate of potash (permanganate 20 grains, sulphuric acid 3 drachms in 1 pint). Decant the turpentine, wash with 2 pints of cold water, separate, and filter if necessary.

31/56. *Felix* asks regarding the following **Sheep-dip Formula**—Is it a good one? can it be improved? will it do for dressing lambs? and how should it be made?

Arsenic	25 lbs.
Crude carbonate of soda	42 „
Water	4 pints
Soft soap	56 lbs.
Carbolic soap	30 „
Sulphur	15 „

The formula is good as things go, but the water is in ridiculously small proportion. At least 10 gallons will be required. Place the water in a copper along with the arsenic and soda; bring to the boil, stirring all the time; then add the sulphur, and continue to boil for ten minutes; then add the soaps, mixing thoroughly, and evaporating further if not of the proper consistency. There are other ways in which the dip can be prepared. By the above method the dip will contain some soluble sodium arsenite and a sulphide of arsenium, as well as sulphide of soda. It is believed by some that arsenium sulphides are of great value in sheep-dips. In order to have these in maximum quantity the sulphur and arsenic must be fused together, and the fused mass treated with the solution of soda. The dip will not prove injurious to lambs if proper precautions are taken.

34/71. *Mercator.*—Dr. James Bell's handbooks on food adulteration (South Kensington Series) are the best which untrained persons can consult. For analytical details Winter Blyth's "Foods" is most useful.

32/39. *Cocaine.*—(1) You should have no difficulty in obtaining **Commercial Cocaine Hydrochlorate** of such purity as to warrant its use hypodermically. Such salts are in large translucent crystals (not flakes), dissolve somewhat slowly in water, and 1 grain dissolved in 1 oz. of distilled water gives, on the addition of 1 drop of liquor ammoniæ, a crystalline precipitate, which subsides in a few seconds, leaving a clear solution above. If the solution is at all milky the salt is not quite pure. The salt may be purified by dissolving in the smallest possible quantity of absolute alcohol, and pouring the solution into six times its volume of absolute ether. The pure salt crystallises out almost immediately, and should be collected without delay and dried in the air. (2) Sodium nitrite will not do to make hypodermic pellets of cocaine. It has a marked physiological action, whereas sodium sulphate has not. (3) **Tinctura Eucalypti, B.P.C.**—Eucalyptus leaves, in No. 20 powder, 4 oz.; rectified spirit, a sufficiency. Make 1 pint of tincture by percolation.

22/15. *Menthol.*— **Syrup of Hydriodic Acid.** —The U.S.P. method of making this acid is the best. Dissolve 95 grains of iodine in 2 oz. of rectified spirit by the aid of heat, and add to a mixture of syrup 2½ oz. and water 3 oz.; pass a current of sulphuretted hydrogen through the solution until the iodine colour disappears, filter clear, and heat the filtrate until the odour of sulphuretted hydrogen disappears. When cold add 1 drachm of spirit of orange, 11 oz. of sugar, and sufficient water to make 16 fl. oz. Squire gives the following modification of the formula:—Hydriodic acid, s. g. 1·500, 160 minims; simple syrup, 14 oz.; spirit of orange, 1 fl. drachm; water to make 15 oz. The syrup contains 1 per cent. of hydriodic acid. There are simpler ways of preparing the acid than the one given above, but, as shown by Mr. Wm. Gilmour in this Journal some years ago, none is so satisfactory as the sulphuretted hydrogen method.

33/13. *Glasgow* has heard of a society which assists **Young Men of Limited Means** (who wish to become medical men) through the university. Is there such a society? Our correspondent is probably thinking of the Medical Missionary Society, which has its head-quarters in Edinburgh, the Rev. John Lowe, F.R.C.S.E., 56 George Square, Edinburgh, having charge of it.

33/46. *Chemist.*—Try the silver and copper lotion which we have given a formula for recently.

Referring to our answer to *Timon* (page 550), who had asked for a formula for a moth-destroyer, Mr. Jas. Wheeler, of Ilfracombe, writes to tell us that the combination of naphthalin and flowers of camphor, if made into solid block form, would be an infringement of patent No. 5,438 held by himself. In the form of powder his patent is not infringed.

33/38. *In Vino Veritas.*—**Blacking for Gun-sights.**—Gas-blacking, ʒss.; methylated spirit, ʒij.; spirit varnish, ʒij. Mix. A white paint for the same purpose may be made with zinc white ʒj. in place of the gas-black, using a pale varnish.

34/52. *A. Dyson.*—(1) **Farcy Ball.**—Sulphate of copper, 30 grains; ginger, 1 drachm; gentian, 2 drachms; strong mercurial ointment, 2 drachms; linseed meal to make a ball. (2) **Tinctura Benzoini, B.P.C.** Benzoin, 1 oz.; rectified spirit, 10 ozs. Dissolve and filter.

36/25. *Pharmacist.*—You cannot recover drawback on the export of sp. chlorof. or sp. etheris. See Section 13 of the General Orders in THE CHEMISTS' AND DRUGGISTS' DIARY, 1890, page 155.

35/68. *Cumberland* makes a **Quinine and Iron Tonic** from the following formula:—

Quininæ sulphatis	gr. xvj.
Acid. sulph. dil.	ʒss.
Tinct. ferri perchlor.	ʒj.
Glycerini	℥ss.
Aquæ ad	℥viij.

The solution becomes almost colourless because the sulphuric acid combines with the iron, but the tonic properties of the mixture are not diminished. The iron salt is also reduced to the ferrous state on account of the glycerine. It would be better to dissolve the quinine by the aid of 15 minims of dilute hydrochloric acid and the tincture.

35/49. *Niger.*—The copper salt is put into the hair-dye partly to develop the colour on the hair, but chiefly for the purpose of colouring the solution.

35/5. *J. L.*—We presume that the article is the crude chromic acid which is now so much used for bichromate cells.

35/16. *W. S.* asks what produces the blue colour of **Gorgonzola Cheese**? This is a subject which was investigated some years ago by a scientific expert, and it would appear from what he learnt of the whole process of manufacture that the cheese is ripened in underground chambers where the temperature is low, and only about two specific micro-organisms exist. It is the action of these micro-organisms which produce the peculiar odour and the bluish colour in the cheese.

36/38. *Brightoniensis.*—What is **Mist. Schopartici**?—represented to be the prescription of an Austrian physician, and said to be a specific for gleet. Dose: a tablespoonful morning and evening. [This is, we understand, a copaiba mixture, prescribed pretty commonly by German physicians of a certain class. The 6-oz. mixture contains ½ oz. of copaiba, with 2 to 3 drachms of powdered acacia, and an aromatic water, such as peppermint.]

Information Wanted.

[*Replies to the following requests are solicited by correspondents of* THE CHEMIST AND DRUGGIST.]

29/25. Maker of machine for gelatine-coating horseballs.

29/51. Maker of a machine to cut oval pills.

30/61. Formula for Erasmus Wilson's skin restorative cream.

33/35. Formula for black varnish (tar and linseed oil) to cost 9*d.* or 10*d.* per gallon.

35/60. Cheap bottles for 1*d.* sauces, where obtainable?

34/72.—*Fields* is not satisfied with the various formulæ which have been published for sticky fly-papers, and asks if any of our readers have a good recipe which they care to give for the benefit of their less fortunate brethren.

35/51. What is sanodyne oil?

Information Supplied.

Gas Odour in Ung. Gallæ o. Opio.—In reply to "Ung. Gallæ," I expect the smell developed in the ointment was due to the conversion of the benzoic acid into benzole. I have found benzole in noticeable quantity in syrup of tolu that had been put away corked up for a year, and should suppose there was some water in the ointment.

J. S. L. (35/29.)

Dose of Turpentine.—As to the case of Martin *v.* Stubbs, fl. ʒiv. to fl. ʒj. of ol. terreb. is a safe dose often given for tapeworm, as it goes at once through the bowels without being absorbed, but ʒj. or ʒij. is not enough to act quickly, and is liable to cause severe inflammation of stomach or kidneys.

J. S. L. (35/29.)

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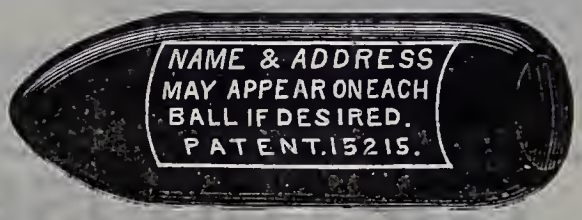

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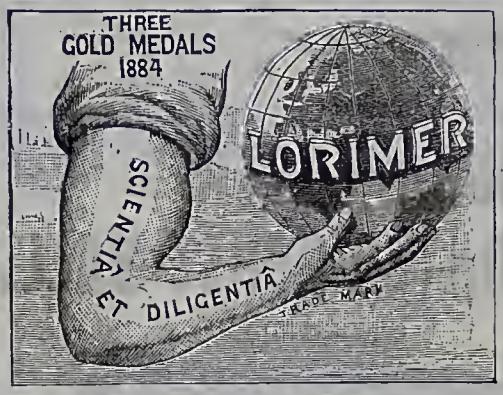

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PUNGENTS, with handsome Cut Stoppers, filled with Allchin's Smelling Salts, 8*s.* per doz.; retail, 1*s.*

OL. ROSÆ. CONCENT.—One ounce of this Concentrated Solution of Anchusine, mixed with two pounds of Oil. will give it the usual colour; it is also admirably adapted for colouring Pomades, Lip Salve, Camphor Balls, &c. 4*s.* per lb.

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The HOP BITTERS CO., Ltd., upon reconstruction, in consequence of the numerous imitations of their world-famed medicine, have deemed it desirable to bring the name of the Originator of these celebrated Hop Bitters (Dr. Soule's) more prominently to the notice of the public, in order to prevent future impositions. They have therefore altered their advertisements accordingly, of which you will please take notice.

The irritation which unfortunately existed during the period of the late administration will effectually be removed by the present management, and the amicable relations with the Trade which formerly existed will, it is hoped, be in future maintained.

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The names and weights of the active substances are printed very clearly on each pill or granule. The object of an easily read inscription, such as this, is to obviate those errors which may so easily occur in handling ordinary granules. The seriousness of such mistakes is a direct consequence of the action of the substances employed. The inscription gives every security both to the invalid and the doctor. The process of manufacturing printed pills and granules makes it possible to obtain absolute homogeneous masses, in which the active principles are uniformly distributed and mathematically dosed. The covering is of a nature which preserves the most changeable medicaments, such as iodide of iron, in all climates. All our various pills and granules are further distinguished by the colour of their covering. The printing is done by means of lampblack, and the colouring matter employed for the coverings is entirely of a vegetable nature.

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			d.				s. d.				s. d.
Amorphous Aconitina ..	1/2	1/120	8	Acetate of Morphia ..	1	1/6	1 3	Codeina	1	1/6	1 8
Crystallised Aconitina ..	1/10	1/600	8	Salicylic Acid	10	1 2/3	0 7	"	2½	5/12	2 0
Arseniate of Soda	1	1/60	6	Aloes	10	1 2/3	0 7	"	5	5/6	2 10
Arseniate of Strychnia ..	1/2	1/120	8	"Anderson's" or				Ergotina	1	1/6	0 10
Bi-chloride of Hydrargyrum	1	1/60	6	"Scotch Pills"	—	—	0 6	"	5	5/6	0 10
Bi-iodide of Hydrargyrum	1	1/60	6	Benzoate of Lithina ..	1	1/6	0 8	"	10	1 2/3	0 10
Colchicina..	1/2	1/120	8	Bromhydrate of Quinina	5	5/6	1 3	"	15	2 1/2	0 10
Acetate of Morphia ..	1	1/60	7	" "	10	1 2/3	1 8	Extract of Belladonna ..	1	1/6	0 7
Hydrochlorate of Morphia	1	1/60	8	" "	15	2 1/2	2 0				
Phosphoric Acid	1	1/60	8	" "	20	3 1/3	2 6	Amorphous Quassina ..	1	1/6	0 8
Phosphuret of Zinc.. ..	1	1/60	8	Bromide of Camphor ..	1	1/6	0 7	" " ..	2	1/3	0 10
" "	2	1/30	8	" " ..	5	5/6	0 8	Santonina	2	1/3	0 7
" "	4	1/15	8	Caffeina	1	1/6	1 3	"	5	5/6	0 8
Picrotoxina	1	1/60	8	Calomelas	1	1/6	0 7				
Crystallised Quassina ..	1	1/60	8	"	5	5/6	0 7	Sulphate of Quinina ..	5	5/6	1 3
Extract of Strophanthus	1	1/60	10	Hydrochlorate of Quinina	5	5/6	1 3	" " ..	10	1 2/3	1 8
Sulphate of Strychnia ..	1	1/60	8	" " "	10	1 2/3	1 8	" "	15	2 1/2	2 0
				" " "	15	2 1/2	2 0	" "	20	3 1/3	2 5
								Sulphate of Sparteina ..	2½	5/12	0 10

The preceding list comprises only a very small portion of the Pills and Granules prepared by the Firm of L. Frère. Their complete Catalogue contains the various formulæ of the French Pharmacopœia, also the leading ones of the British Pharmacopœia, as follows:—

BRITISH PHARMACOPŒIA		Prices: Per Gross	Prices: Per lb.	Prices: Per Bottles of 50 pills	BRITISH PHARMACOPŒIA		Prices: Per Gross	Prices: Per lb.	Prices: Per Bottles of 50 pills
		s. d.	s. d.	d.			s. d.	s. d.	d.
Aloes Barb.	P. B. gr. IV.	1 0	10 0	4	Ferri Carb.	P. B. or "Female Pill" ..	1 0	8 0	4
Aloes and Ferri	P. B.	1 2	10 4	5	Blue Pill	P. B.	1 0	10 0	4
Aloes and Myrrh.	P. B.	1 7	12 0	6	Rhei Co.	P. B. or "Compound Rhubarb"	1 4	12 0	5½
Asafœtida Co.	P. B.	1 4	10 4	5½	Aperiens	or "Antibilious Pill" ..	1 0	10 0	4
Calomel Co.	P. B. or "Calomel Pill" ..	1 2	10 0	5	Podophyllin	gr. 1/4 6,000 per lb.	1 2	20 0	5
Colocynth Co.	P. B. or "Colocynth Pill" ..	1 8	16 0	6½	Acid. Arsenios	gr. 1/60 " "	1 0	10 0	4
Coloc. and Hyos.	P. B.	1 7	13 0	6	Atropia	gr. 1/60 " "	1 4	32 0	5
Ferri Iodid.	P. B. gr. III.	1 8	16 0	6½	Digitalin	gr. 1/60 " "	1 4	28 0	5

The above are the principal pills in daily use, and those P. B. are made in strict accordance with the formulæ of the British Pharmacopœia. In proportion with the demand, other kinds will be added to our list, at equally low prices.

NOTE.—Beyond the pills and granules mentioned in our price list, we manufacture to order any kind of pill or granule of which the formula may be confided to us, with whatever inscription the client may select. These special orders cannot be undertaken for a less quantity than two kilogrammes (4 lb. 7 oz.). It is also necessary to give (**1**) the colour selected for the covering, (**2**) the inscription written very distinctly. This lettering cannot occupy more than 18 European letters. The spaces between the words count as a letter. For the Hindoo languages the number of letters may vary according to the form of type. The price for manufacturing is 18 francs (14*s.* 4*d.*) per kilogramme (2 lb. 3 oz.) of pills covered. Our customers can have the raw materials sent to us by a wholesale drug house, or we will undertake to supply them. It is hardly necessary to add that an absolute discretion is guaranteed. **The Granules** comprise the doses of active principle for $\frac{1}{10}$ milligramme, up to one centigramme exclusively. **The Pills** comprise all the other doses. Each bottle of Granules contains one hundred granules, viz.: 8 doz. ½. Each bottle of Pills contains fifty pills, viz.: 4 doz. ½.

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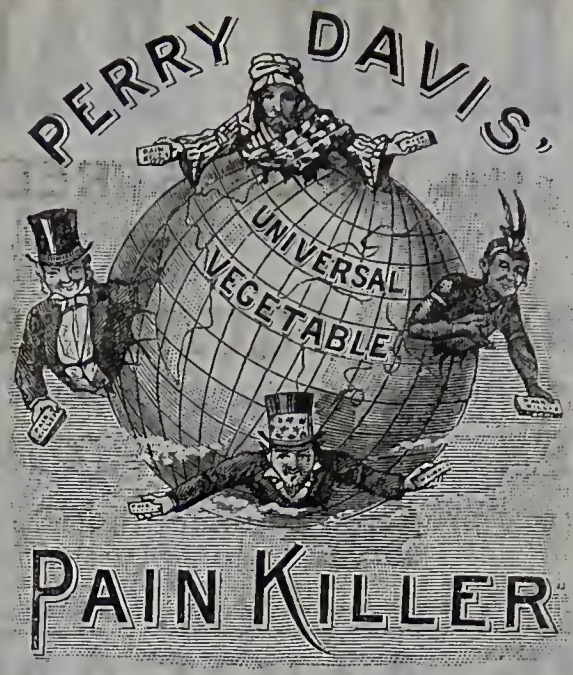

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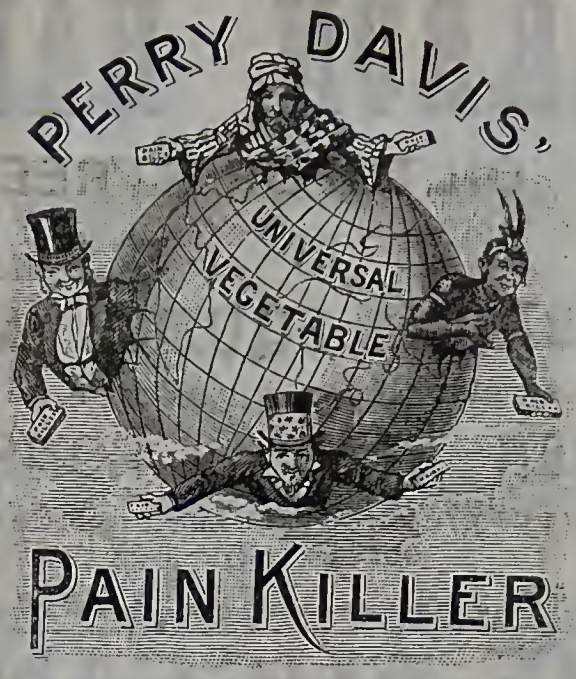

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PURE NATURAL SALICYLIC ACID AND SALICYLATE OF SODIUM

FROM OIL OF WINTERGREEN.

Experimental Research as to the General Comparative Action of the Natural and Artificial Salicylic Acids, and their Salts of Sodium. Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association held in Leeds, August, 1889. By M. CHARTERIS, M.D., Professor of Therapeutics in the University of Glasgow, and W. MACLENNAN, M.B., C.M.

See *BRITISH MEDICAL JOURNAL*, Nov. 30, 1889.

The deductions from these experiments indicate that artificial salicylic acid and its salt of sodium are dangerous and, in large doses, fatal to animals, while salicin, natural salicylic acid, and its salts of sodium are not. That artificial salicylic acid contains an impurity or impurities, and until this or these can be extracted by the aid of chemistry the internal administration of it or its salts of sodium should be discountenanced. Large and repeated doses of the sodium salt are necessary in the treatment of acute rheumatism, and hence we may account for the restlessness, the confusion, and the delirium sometimes attendant on its use, which have been testified by clinical experience. It is more than probable, too, that the retarded convalescence occurring in some cases of acute rheumatism after the salicylate treatment is due to the great and protracted prostration which the impurity or impurities give rise to. It is to be remembered in connection with these symptoms that prescriptions of the salicylate of sodium are invariably made up, unless otherwise indicated, from the artificial and not the natural salt.

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Will positively cure disease that other porous plasters or liniments will not even relieve. For Rheumatism, Sciatica, Pleurisy, Neuralgia, Kidney Affections, Backache, Lame Back, Coughs, and all acute Nervous Pain it has no equal. Recommended, prescribed, and endorsed by the Medical Faculty of all Schools of Medicine as a great improvement on the slow action of the strengthening porous plaster.

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Models under Glass Show Cases, Blocks, Circulars, Glaciers, Show Cards, supplied free of charge to those stocking my goods.

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Bona-fide Manufacturer of Trusses, Elastic Hosiery, Abdominal Belts, the Eureka Medicated Pine Wool Felt Appliances, Obstetric Binders, Chest Expanding Braces, Suspensory Bandages, &c., &c.

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ESTABLISHED 1840.

INDEX TO ADVERTISEMENTS.

Pages 29—31.

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Importers of and Agents for the Principal FOREIGN MEDICINAL PREPARATIONS AND SPECIALTIES.

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Has been tested in a Physiological Laboratory as a Germ Destroyer, and proved to be more efficient than any other experimented with. (*See* "Journal of Chemical Industry, 1888, No. 3.) Of great value in CASES OF

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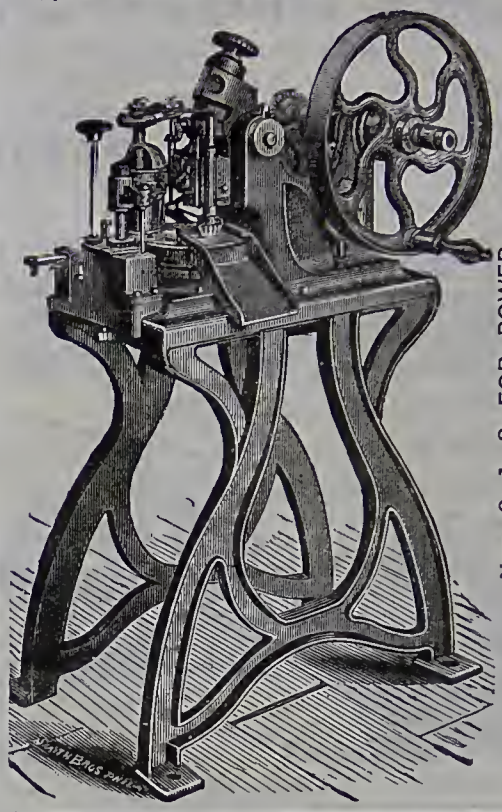

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Reduces lumpy powders, sifts and mixes faster, and makes a more perfect blend than any Machine in the Market.

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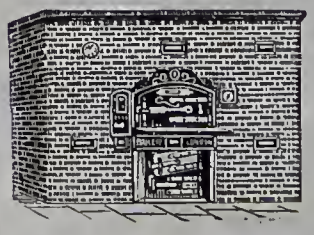

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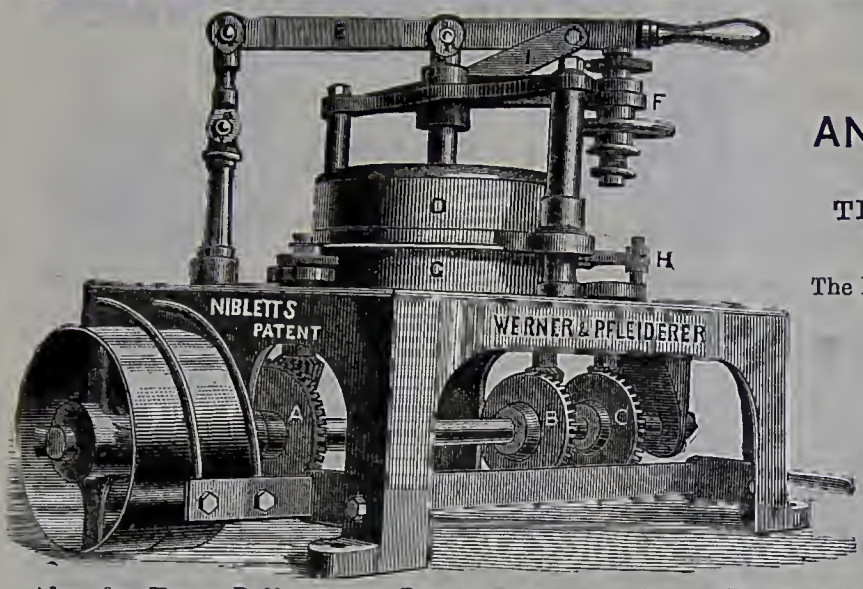

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The Pill Plate takes ¼ lb. of Pills at once, and these are rounded in less than one minute. Can be worked either by hand or power. Used most satisfactorily by some of the best firms in the trade.

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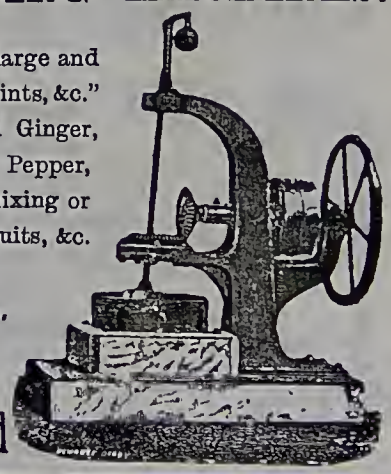

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The only Machine which leaves no crease or pleat on the Capsule.

Can be fixed to any Counter.
A single pull of the lever is sufficient to fix the Capsule.

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Makers of EVERY DESCRIPTION of Glass Bottle ther PLAIN or STOPPERED, in
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IN ALL THE ART SHADES.
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WHITE LEAD, ZINC WHITE,
PAINTS & COLOURS OF ALL KINDS.
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HIGH-CLASS VARNISHES
Of all kinds, for Coachbuilders, Decorators, &c.
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Of any other House, please write for Prices of any size required to either of our Warehouses—

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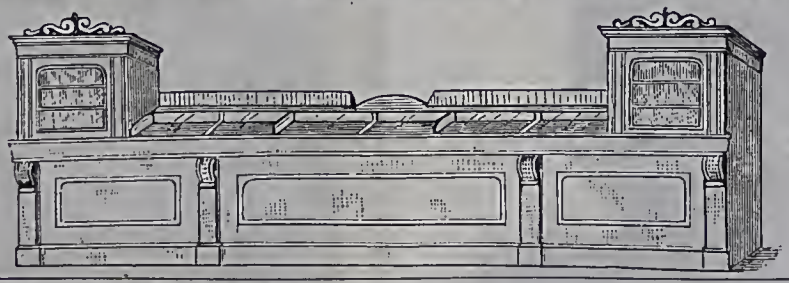

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SHOPS TO LET FOR NEW BUSINESSES.

All kinds of Glass Work in Name Plates, Shelves, Outside Lettered Slips, &c.

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Corns and Bunions may be removed, and enlarged Toe Joints reduced, *by using Thompson's New French Corn Plaster.* Sole Proprietor, M. F. THOMPSON, Homœopathic Chemist, 17 Gordon Street, Glasgow, from whom the Plaster may be had in Packets, *by post, for fourteen stamps.* Those who are troubled with the discomfort of Corns or Bunions will be glad to have attention called to this remedy, as it removes pain very speedily. It is a simple Plaster, thin as silk, and comfortable to the foot.

Ask your Chemist for it, and take no Substitute.

Wholesale 9/6 per dozen, *cash* with order, *post free. May also be obtained through London Wholesale Houses.*

Walking is now really a pleasure to me.

It is put up on Cards. "Very saleable."

Trade Mark. Registered.

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ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH,

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SOLE AGENTS FOR DR. WARLOMONT'S CALF VACCINE.

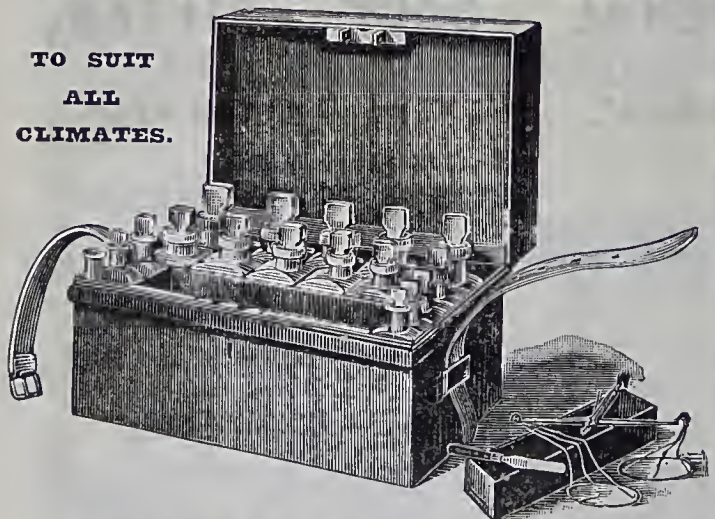
Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.

HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Tubes, two-thirds full, 1s. 8d. each; Tubes one-third full and Lancet-charged points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged Small Points, 5s. Tubes, two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccine Ejectors, 1s. 3d. each, including postage. Vaccinations by appointment. P.O.O.'s (including postage, and crossed London and Westminster Bank) with orders, payable to EDWARD DARKE *Secretary.*

Office hours, 10 to 4. Saturdays 10 to 2

BENTLEY'S COLONIAL MEDICINE CHEST

TO SUIT ALL CLIMATES.



The above is made in Black Japanned Tin, size 10×6¼×5½, fitted with Lock, Key, and Strap; contains 5 4-oz., 6 2-oz., and 5 ½-oz. stoppered bottles, Scales, Knife, and Measure, space for Plaster, &c. Price 16/6.

E. BENTLEY & SON,

Exporters of Bottles, Druggists' Sundries & Medicine Chests.

14 TABERNACLE STREET, LONDON, E.C.

By Royal Letters Patent.

THE TEETHING PADS TO SELL.

THE "LILY" BABY COMFORTER.

The teats are seamless, and always retain their proper shape.
The Child Cannot Possibly Imbibe Air.
The chief feature of this invention is *the free ingress and egress of air into and from the teat during suction.*

6d., 9d., AND 1s. RETAIL.

All Patterns may now be had, fitted with Marriott's New Patent Ring Socket. No. 17,135.

For inserting Bone, Indiarubber, and other Rings into Teething Pads, Baby Comforters, or other articles without cutting the ring, which is guaranteed not to break.

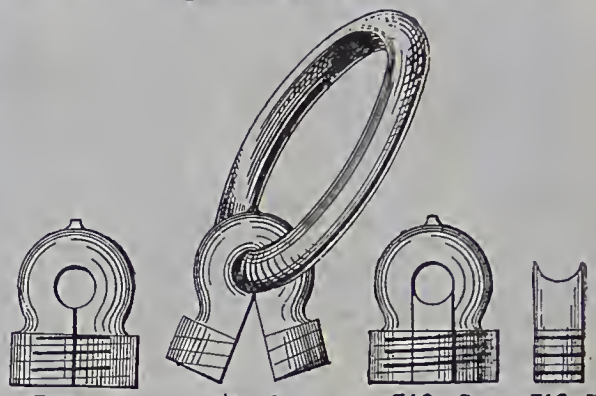


FIG. 1. FIG. 2 FIG. 3. FIG. 4

New Design Just Out.

The "LILY" DEWDROP. Price 6d.

With Hard Rubber Pad one side of Ring, and Blind Soft Teat at the other

Patentees and Manufacturers, **E. MARRIOTT & CO., HASTINGS.**

And of all Wholesale Houses.

BAILEY'S PATENT BRUSHES

The Latest Novelty is our

RUBBER

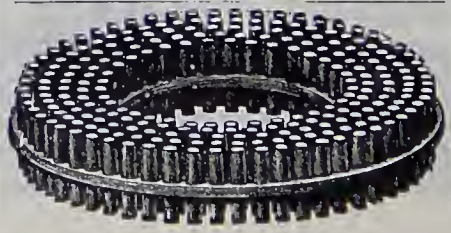
Complexion Brush.

Price 3s. 6d. each,

PACKED IN A NEAT BOX.

Entirely does away with poisonous cosmetics and face-washers. Used in the ordinary daily ablutions, with a little soap, it makes the skin beautifully fresh, soft, and smooth, and effectually eradicates all blemishes, blotches, pimples, &c. Used as a shampoo brush, gentlemen will find it a most useful adjunct to the toilet, as it entirely removes scurf and dandruff. Mothers and nurses will find it invaluable for bathing the delicate skin of infants and children.

Prices—Bath Brushes 5s; Toilet Brushes, with Handles, 1s. & 2s. each; Tooth Brushes, 10d. & 1s.



Bailey's New Rubber Teething Ring.

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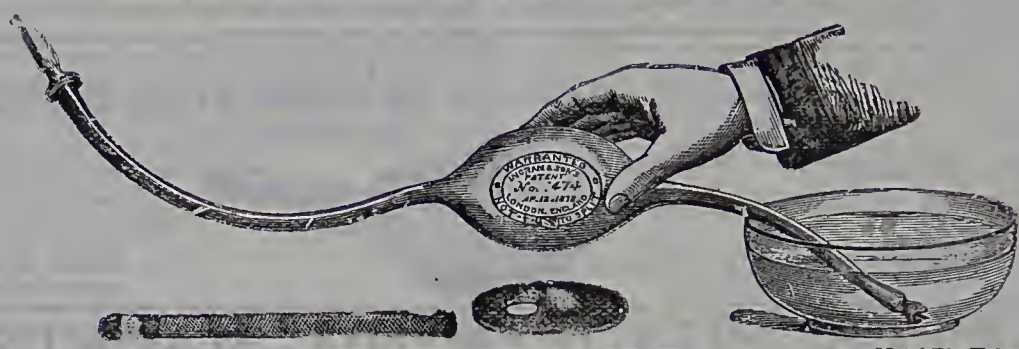

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Favourably noticed in "British Medical Journal," December 13, 1879; in the "Lancet," January 8, 1880; and in "British Medical Journal," September 30, 1882.

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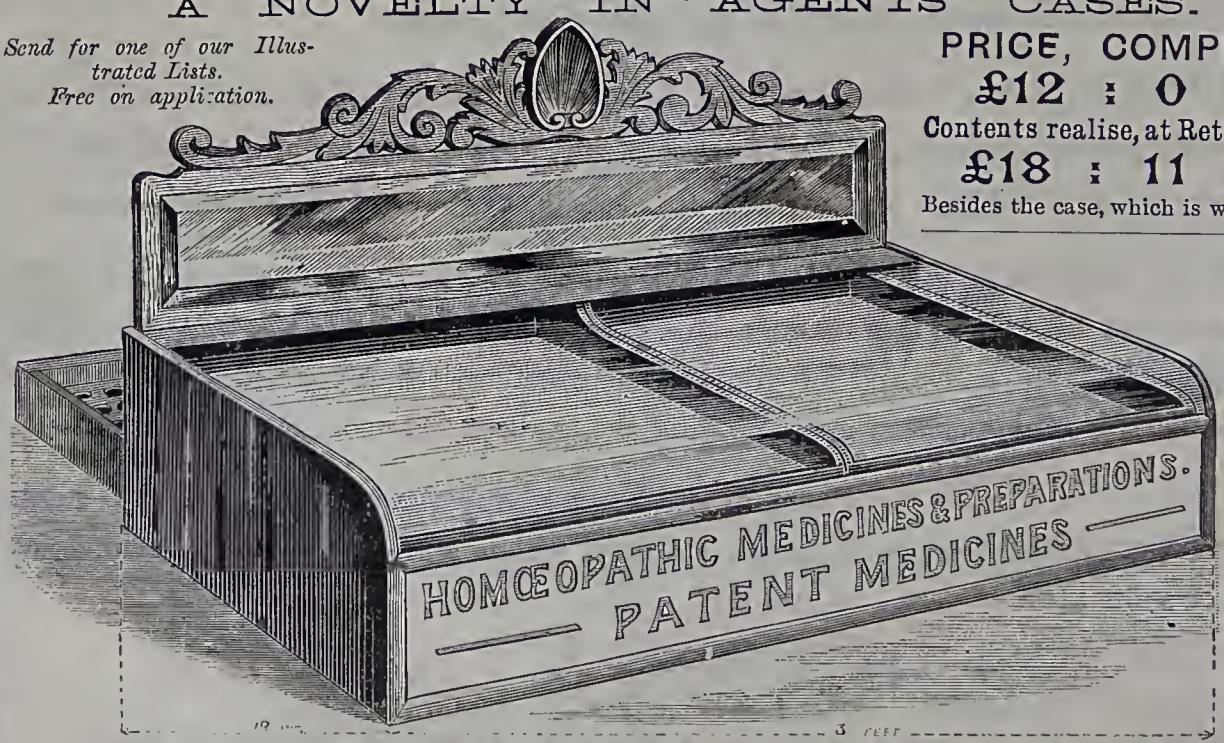

This Showcase has been designed to assist in furnishing a Chemist's Counter, either when commencing business, or when refitting the Pharmacy. It is a good-looking Case, made of Mahogany and bent-plate Glass, with a carved Back and bevelled Mirror. The velvet-lined Top is left empty for Fancy Articles, Patent Medicines, &c.

(Dimensions, 3 feet long, 18 inches wide, 8 inches high, 18 inches to top of mirror.